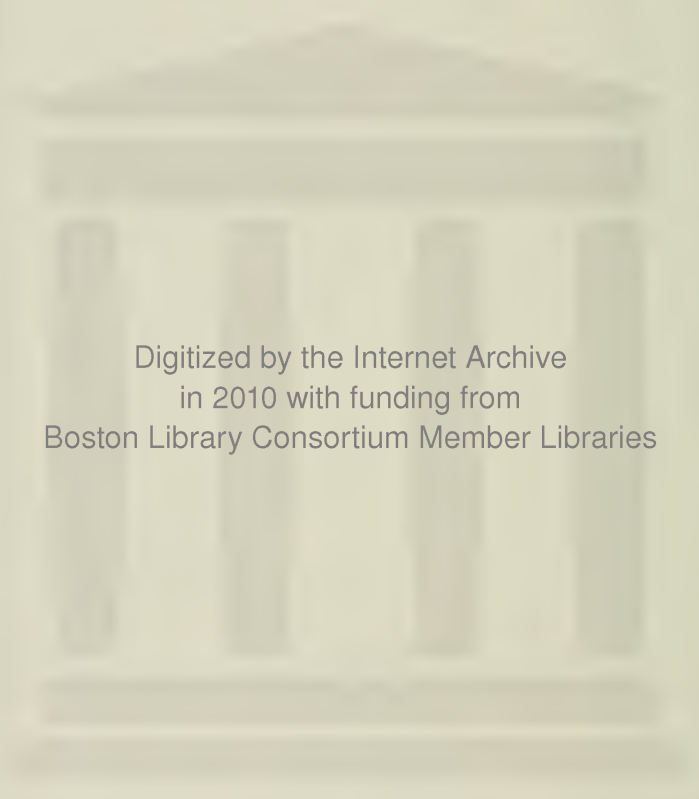


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# FIFTH ANNUAL REPORT

OF

## THE TRUSTEES

OF THE

# MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),

AT CANTON,

FOR THE

YEAR ENDING NOVEMBER 30, 1912.



BOSTON:  
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OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

The report of the superintendent here presented indicates the progress of the institution in usefulness during the past year. This is an added demonstration of the wisdom of the Commonwealth in the establishment of this institution five years ago, which in a comparatively short time has shown not only the need of schools of this kind, but also in what way children, handicapped by physical disabilities, may best be managed.

It has been shown that in our Commonwealth a not inconsiderable number of children have been hitherto brought up without education, becoming illiterate owing to their physical inability to attend school, and that under proper management almost all these children can be educated so as to become useful and to a greater or less degree self-supporting.

It has been shown that these cases need special provisions for education as to hours, curriculum and requirements, and that these should be combined with provisions for improvement of their physical condition and for surgical treatment.

Fresh air is especially needed for these cases, and under the present management of the school the children enjoy the benefit of this under the most favorable conditions. This has been beneficial to their health in a marked degree, shown not only in an improved general condition but also in freedom from contagious diseases and colds, affections of the throat, glands and other complications.

The value of the educational advantages in the school has been amply shown by those who have left the school, finding themselves fully equal to their healthier comrades whose education has been conducted in the public schools.



The curriculum has arranged for intensive teaching for a short time, with the rest of the day provided for outdoor work or technical training and guidance as to play and entertainment. The rapid progress of the children under this system has been the subject of remark by all teachers.

Another great advantage which the hospital school has given to its children has been the opportunity for character building. As a rule, children who are crippled are the object of either special pity or neglect at home. They become introspective and inefficient and in many cases ignorant. The association of these children with others similarly handicapped, and the placing of them under healthy conditions, directly stimulating opportunities for play, study and amusement, destroys any sense of self-pity and teaches them to forget or minimize their disabilities. In this way the first requisite in beneficent education is furnished.

That the education of crippled children could be helped by any form of athletics would at first seem impossible; but it will be remembered that there are many forms of physical disabilities, and that by the aid of apparatus paralyzed limbs can be supported in such a way as to make locomotion possible. That, however, an excellent baseball team could be organized by the pupils of the hospital school was a surprise to the Board and to the visitors at the school. The benefit of this in stimulating the activity of the children and encouraging them to forget their disabilities is a great privilege which has been furnished for many of them to develop intelligence and self-reliance.

A boy wearing an artificial limb or a prothetic mechanical appliance, who is thereby able to distinguish himself in running bases on a successful ball team, is aided in the development of self-reliance and his success stimulates others who are equally handicapped.

The aptitude displayed by the children selected by the superintendent for a brass band deserves special comment. This, as well as athletic sports, has helped in the educational development of the children.

The work of the girls in the domestic science cottage, in which they are taught housework, cooking and the elements of domestic science, has proved to be of great practical value.

The question of self-support of graduates from the school is one which has required the attention of the Board since the graduation of the first class last June. Several of these have found positions; others have returned to their homes, and the fact has been demonstrated that many of the pupils of the school, after proper training, can in later life either maintain themselves or help in their support. When it is remembered that these cases without proper education would have been either almshouse inmates for life or absolutely dependent upon others, the benefit derived from the school will appear valuable. Some arrangement will be necessary in the future for the proper supervision of the graduates for the few years following their graduation and their first attempt at self-maintenance. It is hoped that by the co-operation of charitable associations in different parts of the State proper supervision can be arranged without further tax upon the resources of the school.

It is manifest that the plan of education of these children should be eminently practical and vocational, with a special training for such occupations as may be adapted to the physical defects of the pupils, and that this training be founded upon the primary school basis.

The question of a water supply is one to which the trustees have given much consideration, not only on account of the cost of purchasing water from the town, but because the institution is not at present properly safeguarded in case of fire.

The elevated situation of the buildings renders it impossible for the town, with its present standpipe, to supply water at an average pressure of more than 40 pounds at our lowest point.

Four test wells were driven to determine the possibilities of a ground-water supply, but it was found that there is not a good water-bearing formation above the bed rock. Although there is uncertainty as to the depth and yield of drilled wells, there is no reason to suppose that our conditions are materially different from those of several near-by points at which drilled wells have yielded about 40 gallons per minute at an average depth of about 250 feet.

Competent engineers, with whom the trustees have considered the matter, estimate the cost of a drilled well, tower and pumping apparatus at \$7,000.

The agricultural buildings, which were completed last spring, have proved most satisfactory; but a cow barn should be added to make them complete. It is not desirable that an institution for children should be entirely dependent upon the market for its milk supply.

We are, therefore, asking for the following appropriations:—

For a water supply, . . . . .	\$7,000
For a barn for 40 cows, . . . . .	3,000

The Board would report the near completion of an assembly hall and a new dormitory for older boys, both of which will materially aid the work of the institution. As the latter presents some unusual features of construction which promise to be of great advantage in the problem of furnishing fresh air at a minimum cost to schools, hospitals and institutions in which fresh air is especially needed, a more detailed mention of the construction of this building may be of service and is herein presented.

The superintendent's and treasurer's reports are hereto annexed and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
ALFRED S. PINKERTON.  
WILLIAM F. FITZGERALD.  
WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to submit herewith the fifth annual report of the Massachusetts Hospital School for the year ending Nov. 30, 1912.

Four hundred and eight children have been cared for since the establishment of the institution, 60 having been admitted and 43 discharged during the past year. On Dec. 1, 1911, there were 228, — 146 boys and 82 girls. The maximum number at any one time was 239, the minimum 193, and the daily average 228.56, an increase of 13.79 over the previous year.

Of those admitted the oldest was sixteen, the youngest four, and the average was nine years, ten months.

There were 23 cases of bone tuberculosis, 25 of some form of paralysis, 12 of rickets, malnutrition and various deformities, and all were certified by physicians as being physically unsuitable to attend the public schools. Of the 28 boys and 15 girls who were discharged, 21 left to attend the public schools or to become self-supporting, 4 were dismissed as incapable of physical improvement or advancement in school, 10 were taken by their parents against advice and 8 children died. Death was due to tuberculosis in 6 cases, pneumonia in 1 and nephritis in 1.

Although the infirmary wards have been practically filled throughout the year with surgical cases and patients requiring bed treatment for sundry temporary illnesses, the general health of our entire population has been remarkably good. The quarantine cottages have not been occupied except for a period of five weeks, when one employee was under treatment for a severe attack of erysipelas.

The entire absence of contagious diseases in a large group of children is all the more noteworthy when it is considered that

the school has admitted more than 4,000 visitors, and that 175 visits have been made by our children to their homes during the year.

Aside from the numerous minor surgical operations and the great amount of routine plaster of Paris and apparatus work which has been attended to by the resident physicians, the consulting orthopedic surgeons have made frequent visits for the examination of all newly admitted patients, to perform operations, and to advise in the care and treatment of children requiring special expert attention.

The visiting dentist has made 52 visits for a systematic examination of the children's mouths, and his report shows 79 extractions, 79 treatments, 115 cleanings and 105 fillings. It is a significant fact that the hospital school children, 90 per cent. of whom have had defective teeth upon admission, have never required operations on account of enlarged or diseased tonsils. This remarkable record is undoubtedly due principally to the continuous supply of pure air which the children here enjoy; but as a further preventive of tonsillar and other affections, the dentist's visits should be extended to at least two days each week during the ensuing year.

The appointment in February of Dr. E. V. Keller, a graduate of the Atlanta School of Medicine, of the class of 1910, as another resident assistant physician, rendered possible a division of the routine medical work, without which important laboratory study and the satisfactory analysis and recording of symptoms would have been impossible.

There were at the close of the year 129 children wearing splints, crutches or apparatus to be fitted, applied and frequently readjusted, and 32 cases requiring continuous surgical dressings. One hundred and one splints have been manufactured and 310 repaired in our own shops by resident mechanics and pupils in the industrial departments.

The group of farm buildings provided by Resolves of 1911, chapter 148, and mentioned in my report of last year, was completed in March within the amount appropriated and admirably serves its purpose.

Two years have been spent in the consideration of plans for a cow barn, which experience has shown with increasing clear-



ness to be most necessary. The plan, which has the approval of the State Board of Charity, contemplates a plain one-story shed, connected by a bridge with the present barn and large enough for 40 cows, construction to be of reinforced concrete floor and sides, with a monitor roof of wood. I recommend that you ask for an appropriation of \$3,000, the estimated cost of such a building.

Another matter of great importance is our present inadequate water supply, for which we are paying a recently increased rate. Water pressure at our boiler house, which is 15 feet below the administration and five other buildings, seldom exceeds 40 pounds to the square inch.

Although the town's water supply is not increasing, its water mains are annually being extended, and for the past three years the water commissioners have been obliged to forbid the use of water on lawns and gardens during the dry season.

Our buildings are equipped with standpipes and hose, but they would be wholly ineffective in case of fire with our present water supply.

Test borings have been made by experts, who report that driven wells are not promising for a water supply here, but that drilled wells at a depth of about 250 feet have yielded well at several near-by points. I therefore recommend that you request an appropriation of \$7,000 for drilled wells, standpipe and pumping apparatus for an independent water supply.

The final appropriation for an assembly hall, Resolves of 1912, chapter 63, became available in June, and after the original plans were carefully considered, modified and improved the contract was let to the lowest bidder and the work was begun in July from plans drawn by S. W. Mead, architect.

This building, which is now nearly completed, is by far the most attractive and substantial of our group. It is built of brick with stone trimmings, has a slate roof, and measures 105 feet long by 51 feet wide. The front elevation of one story faces west toward the campus, and its broad veranda joins the original pergola by a covered granolithic walk extending in front of the laundry, past the easterly end of the east dormitory to the industrial building. There are two stories in the rear, the

basement intended for a machine and apparatus shop being on the same level as the engine house boiler room.

The interior is arranged for a library and reading room across the south end and a spacious stage with four dressing rooms on the north end, while the central part, with its unfinished brick walls and exposed roof of heavy Georgia pine timbers, affords a most attractive auditorium with seating capacity for 546 persons.

The most notable result of the year in building construction is a two-story boys' cottage, having an independent and directly ventilated monitor roof for each story. Following the plan suggested by the west ward of the infirmary, an unsuccessful effort was made to get an estimate on architects' specifications within the approved sum of \$12,000. The lowest estimate received was \$12,000, exclusive of architects' fees, heating, lighting and plumbing. The institution was most fortunate, however, in securing the services, as resident carpenter, of Ira B. Spaulding, a man of rare mechanical skill and building experience, who drew designs and made plans in accordance with the ideas which our experience with monitor-roof ventilation suggested. Your confidence in Mr. Spaulding was well founded, for the building, now nearly finished, will not only be better constructed, but at a saving of at least \$2,500 less than contractors' estimate, which will probably be sufficient to include heating, lighting, plumbing, furnishings and equipment complete.

The cottage, which is 38 by 73 feet, will accommodate 34 persons. On the first floor, extending the entire width of the house, is a living room 37 by 26 feet; a kitchen and dining room 37 by 25 feet; and three smaller rooms to be used as bedroom, lavatory and storeroom. The upper story is divided into bedrooms without partitions on the long central corridor side, and has in addition to a bathroom and linen closet accommodations for two nurses.

Having in some respects overcome the objections heretofore made to roof ventilation, — that one-story buildings were impossible when economy was necessary in districts in which land valuation was high, and that such buildings could not be made comfortable and attractive for patients, — I wish to briefly



record in this report the conditions which led to the evolution of the monitor-roof shack into a two-story ceiling ventilated house.

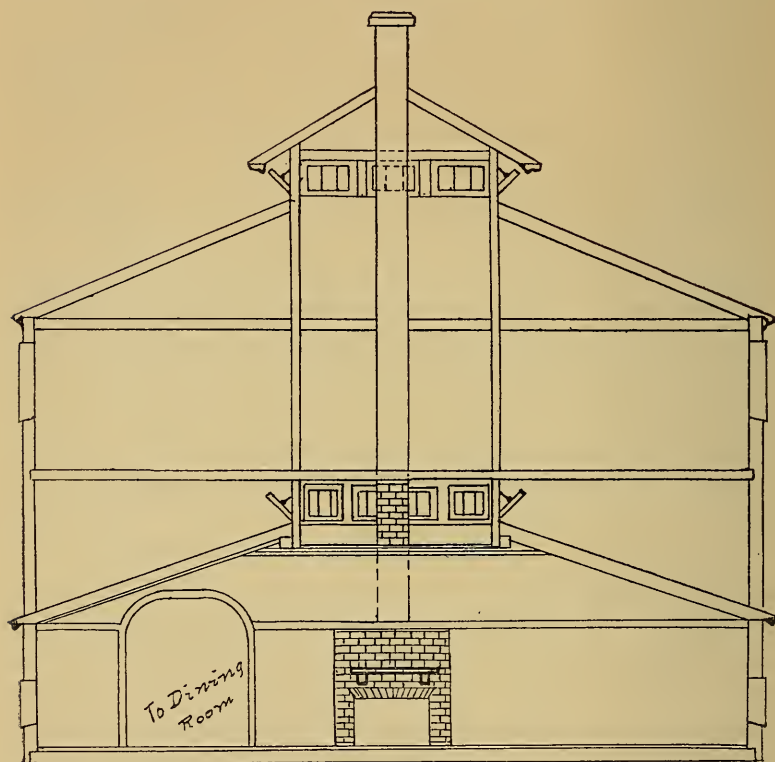
Except as a matter of curiosity it was not necessary to prove, as we did by actual test, that our monitor-roof wards could be cleared of a smudge in about thirty-five seconds, while it required more than thirty minutes to clear our indirectly ventilated schoolrooms. The air in the schoolroom, after it had been occupied for a few minutes by a small class of 12 or 15 pupils, as compared to the air in a ward of 40 children was enough to condemn the indirect system without question.

A great change has taken place within a few years in the ideas entertained in the scientific world in respect to ventilation, a change which has led and is still leading to the most important practical results. The generally understood fact that ventilation means the circulation of air has led to the introduction of an endless number and variety of methods of heating and ventilating which so direct the air currents that the foul air close to the ceiling and in corners is not removed, and the occupants of most "well-ventilated rooms" unconsciously breathe a mixture of both foul and pure air. Our dormitories, with ceilings sloping to a long line of open windows on each side of the roof, have been found by actual experience to afford most perfect ventilation. The difficulty, however, in finding means to prevent leakage around the windows on the windward side during severe storms led to the experiments which resulted in the construction of one ward at the infirmary with a flat roof extending the full width of the ward. In this way the ideal method of ventilation was not affected, and the flat roof projection not only prevented the windows from leaking when they were closed, but it was also found that they could be kept open on the windward as well as on the opposite side during all ordinary storms. Having demonstrated that the flat roof not only did not impair the efficiency of the ventilation system which we have come to regard as indispensable, but that it was actually improved thereby, a second story for the new cottage was suggested, and as it is already being copied elsewhere it may not be improper to predict that it will meet rapidly increasing favor.

The boys in the industrial classes who hope to gain a school

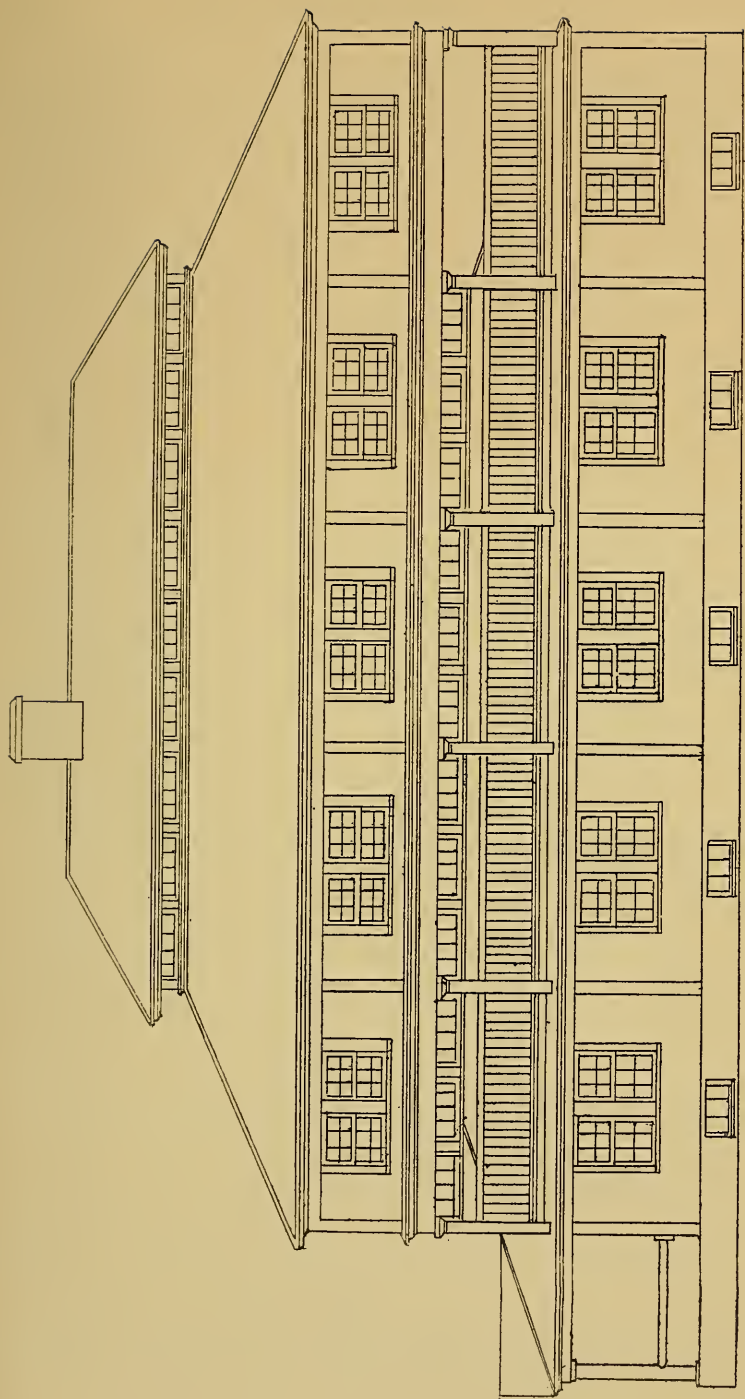
residence at the new cottage, as well as many others who have followed its construction, believe it will be even more homelike and attractive than the girls' cottage.

The number of pupils in the scholastic work has been greater than ever before. We now have groups corresponding to the



*Cross Section Through Living  
Room*

eight grades of the public schools, as well as a subprimary department. Owing to the size of the first, fourth and subprimary departments they are each divided into two sections. Promotions are made freely from group to group at any time during the year when a pupil shows evidence of ability to do the work of the class next above him. Two of the three classrooms in use for the academic work are outdoor rooms.



Two-story boys' cottage, having an independent and directly ventilated monitor roof for each story.



Our increased number of pupils calls for a corresponding increase in the classroom space and in the teaching force. Experience with small groups for short periods shows that whenever a group exceeds 15 pupils the work suffers. Ten would be nearer the number that should be taught at one time.

On June 26 the exercises of the first class to be graduated from the grades were held. The gathering was attended by relatives and friends of the graduates and other invited guests, together with the trustees, employees of the institution and the pupils of the upper grades. Nine boys and 4 girls received diplomas.

The exercises consisted mainly of short talks by the graduates upon some form of the school work in which they had been engaged. Thus one girl told how a dress is made in the sewing room; another described in an amusing way her struggles with cooking at the domestic science cottage; one of the boys gave a good description of work in the cobbling shop; the manager of the baseball team spoke of the value of athletic sports to the school; and another, who is an enthusiast in poultry, gave a bright and practical discussion on the care and raising of chickens. All the girls but one made their own graduation dresses, having acquired the art since coming here.

The hall was decorated with flowers and bunting in the school colors, Indian red and cream white. The class manifested a great deal of interest and responsibility in preparing for the occasion. The comment of one of the guests that "What they said rang true," was a just one, for in what they wrote and spoke they were in most cases drawing on their own experience. The honor of receiving a diploma from the hands of one of your number was evidently of much value to them.

One of the graduates of 1912 is doing well in the first year of a high school course, having made preparation here while recovering from extensive bone tuberculosis; another is acting as messenger to the Western Union Telegraph; still another has entered a commercial school; and one has employment in a printing office in his native city.

Those whose physical condition makes it advisable to remain here longer have been variously placed in the different indus-

trial classes. The boy interested in poultry has been working out his theories with the result of a neat profit to the school.

It would seem necessary, as the number of remaining graduates increases, to arrange for carrying on further scholastic work, especially for those whose disabilities prevent school attendance elsewhere, and whose wage-earning ability is dependent upon an education above the grammar grade. Several different times during the year we collected material for use as an exhibit of our grade and industrial work. Charts containing the work of a number of selected pupils went to the Child Welfare Exhibit at Northampton. During the spring an exhibit from all the grades was prepared to show the Orthopedic Club on its visit here, and a portion of the work of the graduating class was reviewed by a group of students from the School for Social Workers.

One vacation teacher was employed during the summer, and in addition one of the regular grade teachers remained on duty. The work was planned to allow for special coaching of those pupils who for any reason, such as long-continued illness at the infirmary or insufficient previous education, were deficient in regular class work.

There were also classes in elementary hand craft for boys and girls on alternating days. Braiding, weaving, basketry and raffia work were taught. A doll's house was made and furnished. The results of the summer's work would seem to warrant the arrangement of a thorough course in elementary hand work as an introduction to the regular sloyd and sewing. Sloyd continued through the year until the middle of August, when the instructor, Mr. Spencer E. Holland, resigned to accept a position in Pittsburg, Pa.

The holidays have been as usual appropriately observed. The Fourth of July parade was more elaborate than ever before. Hallowe'en sports were given in three groups, owing to the number and diversity in age of the children. The crowning treat of the year, the visit of warm-hearted old Santa in the person of one of your members at the gay Christmas festival, was enjoyed by every child.

The band of eighteen pieces has by its music added much to the pleasure of many events. Under the same able and effi-



cient band master as last year, 31 lessons have been given. Besides the pleasant hours they have given at the school, they have furnished music at a number of outside entertainments, such as the grange fair at Ponkapoag, the annual grange picnic, a fair and supper at the Unitarian parish house, etc.

Through the generous Christmas gift of a friend, instruments for a girls' mandolin and guitar club have been purchased, and soon it is hoped that the girls like the boys will receive much pleasure and profit through the musical instruction of the club.

The interest of the pupils in dramatic work continues unabated. Several plays have been given and are now in preparation. The opening of a new assembly hall will give enlarged opportunities for this valuable part of the educational work.

Enthusiasm over baseball has been stimulated by the organization of a substitute nine and a series of games played with outside teams.

A large number of extraordinary repairs have been caused by imperfections in the construction of the first buildings, but with the competent crew of resident mechanics, permanent repairs are being made each year which should eventually lower the cost for ordinary repairs.

Canvas-covered dadoses, which were not intended for the lively spirited type of cripples we have, are being replaced with cypress sheathing whenever repairs are necessary. Lime and mortar plaster, which pitted badly and was not properly clinched, is being replaced with wood pulp plaster and painted with lead and oil in place of calcimine.

A review of the work on the farm and grounds shows that more has been accomplished than in any previous year. Practically all the land west of the boiler house is now cleared and ready for cultivation. Old roads have been improved and new ones laid out. All the work of grading about the three new buildings has been done by our own men and teams.

Three thousand one hundred and forty pounds of pork and 2,701 pounds of beef have been dressed and the following crops harvested: 3 tons hay, 3 tons millet,  $3\frac{1}{2}$  tons rye straw, 26 barrels squash, 17 bushels summer squash, 22 barrels field pumpkins, 9 barrels sugar pumpkins, 804 bushels potatoes, 184 bushels turnips, 31 bushels beets, 27 bushels cabbage, 43 bushels



sweet corn, 15 bushels field corn, 30 bushels tomatoes, 5 bushels spinach, 44 bushels shelled beans, 42 bushels string beans, 6 bushels rhubarb, 8 bushels radishes, 11 bushels peas, 24 bushels parsnips, 10 bushels lettuce, 37 bushels cucumbers, 23 bushels carrots.

In January, 16 young pigs died of hog cholera, which was evidently contracted from a boar purchased a few weeks before. They were isolated early, and as soon as the diagnosis was confirmed by bacteriological report, immunizing serum was administered to the other animals who escaped infection.

Maintenance expenses for the year amounted to \$66,565.45, which divided by the daily average number of children, 228.56, gives a weekly per capita cost of \$5.57.

Receipts for the board of children amounted to \$38,263.35 and from other sources \$416.39, making the total income \$38,679.74. By deducting the receipts from the gross expenses the net weekly per capita cost is found to be \$2.33.

It is most gratifying to be able to report an exceptionally large number of most efficient employees who have developed with the institution.

The amount of voluntary service in the interests of the children at such times as holidays, baseball games, picnics and entertainments, is deserving of special mention, and of those who have not been adapted to the work, and who for other reasons have been obliged to leave, several have continued their interest in numerous ways.

In May, 58 fine, vigorous pin oak trees were planted by all persons on the institution's pay roll in order of length of service, and a lively interest has been maintained to make each tree grow.

The institution is indebted to an increasing number of friends, especially in Canton and adjoining towns, whose gifts and kind attentions at Christmas and throughout the year are a source of great pleasure to the many children who are individually remembered.

Religious services as heretofore have been regularly conducted by local and visiting clergymen.

There have been few changes in the official family during the year. Reference has already been made to Dr. Keller's appoint-

ment and to Mr. Holland's resignation. Miss Blanche B. Pulsifer and Mrs. Agnes R. Gay, both graduates of the Boston Children's Hospital and with records of most creditable service, were appointed as head nurses to succeed Miss Frances A. V. Palmer and Miss Margaret Cochrane, who resigned in August.

I wish to express my sincere thanks for your generous action in giving me a leave of absence to visit European hospitals during the summer, and my appreciation to Dr. Daniels and his associates who rendered loyal and efficient service during my absence.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*

## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations on the New York, New Haven & Hartford Railroad.

Post-office address, Canton, Mass.

Applications for admission should be made to the superintendent.

### NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	49	10	11
Other New England States, . . . . .	2	3	4
Other States, . . . . .	2	2	6
Total native, . . . . .	53	15	21
Other countries:—			
Austria, . . . . .	—	—	1
Canada, . . . . .	1	5	2
England, . . . . .	1	6	4
Finland, . . . . .	—	1	1
Ireland, . . . . .	—	10	11
Italy, . . . . .	—	4	3
Newfoundland, . . . . .	1	4	4
Portugal, . . . . .	—	1	—
Russia, . . . . .	2	3	3
Sweden, . . . . .	1	2	2
Western Islands, . . . . .	—	1	1
Total foreign, . . . . .	6	37	32
Unknown, . . . . .	1	8	7
Totals, . . . . .	60	60	60

## DISABILITY ON ADMISSION.

	Boys.	Girls.	Totals.
Angioneurotic edema, . . . . .	1	—	1
Amputation of both legs below knees, . . . . .	1	—	1
Congenital club feet, . . . . .	1	—	1
Flat feet, traumatic, . . . . .	1	—	1
Multiple joint disease, . . . . .	1	—	1
Osteomyelitis, . . . . .	—	1	1
Paralysis, infantile, . . . . .	13	5	18
Paralysis, obstetrical, . . . . .	2	—	2
Paralysis, spastic, . . . . .	2	2	4
Paralysis, spina bifida, . . . . .	1	—	1
Rachitic deformity, . . . . .	1	1	2
Rachitic deformity, knock knees, . . . . .	1	1	2
Round shoulders, . . . . .	1	—	1
Tuberculous disease of hip, . . . . .	5	4	9
Tuberculous disease of knee, . . . . .	2	1	3
Tuberculous disease of spine, . . . . .	6	4	10
Undiagnosed, . . . . .	2	—	2
Totals, . . . . .	41	19	60

## VALUATION.

Nov. 30, 1912.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building, two dormitories and power house, . . . . .	147,184 08
Infirmery, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	16,011 98
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	6,627 46
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Three isolation houses, . . . . .	751 00
Goat house and henhouse, . . . . .	280 00
Four portable hog cots, . . . . .	200 00
Shop, . . . . .	150 00
Granolithic walks, . . . . .	1,986 56

---

 \$240,288 10

## PERSONAL PROPERTY.

Food, . . . . .	\$2,113 17
Clothing, . . . . .	2,806 19
Furnishings, . . . . .	22,810 01
Heat, light and power, . . . . .	3,981 93
Repairs and improvements, . . . . .	2,503 70
Farm, stable and grounds, . . . . .	7,178 48
Miscellaneous, . . . . .	3,411 23

---

 \$44,804 71



*Payments.*

To treasury of Commonwealth, institution receipts,	.	.	.	\$38,679 74
Maintenance appropriations:—				
Balance November schedule, 1911,	.	.	\$6,363 55	
Eleven months schedules, 1912,	.	.	60,068 69	
November advances,	.	.	1,638 41	
				<hr/> 68,070 65
Special appropriations:—				
Approved schedules,	\$25,620 86			
Less advances, last year's report,	86 00			
			<hr/> \$25,534 86	
November advances,	.	.	632 15	
				<hr/> 26,167 01
Balance Nov. 30, 1912:—				
In bank,	.	.	\$2,920 27	
In office,	.	.	109 17	
				<hr/> 3,029 44
Total,	.	.	.	<hr/> \$135,946 84

## MAINTENANCE.

Appropriation,	.	.	.	\$69,027 00
Expenses (as analyzed below),	.	.	.	<hr/> 66,565 45
Balance reverting to treasury of Commonwealth,	.	.	.	\$2,461 55

*Analysis of Expenses.*

Salaries, wages and labor:—				
General administration,	.	.	\$10,639 29	
Medical service,	.	.	4,102 85	
Ward service (male),	.	.	2,110 28	
Ward service (female),	.	.	7,769 07	
Repairs and improvements,	.	.	574 78	
Farm, stable and grounds,	.	.	2,171 89	
				<hr/> \$27,368 16
Food:—				
Butter,	.	.	\$1,904 88	
Butterine,	.	.	16 20	
Beans,	.	.	164 71	
Bread and crackers,	.	.	89 17	
Cereals, rice, meal, etc.,	.	.	304 56	
Cheese,	.	.	72 99	
Eggs,	.	.	1,355 96	
Flour,	.	.	1,409 80	
Fish,	.	.	901 80	
Fruit (dried and fresh),	.	.	1,170 71	
Meats,	.	.	4,701 84	
Milk,	.	.	2,987 50	
Molasses and syrup,	.	.	39 33	
Sugar,	.	.	1,013 82	
Tea, coffee, broma and cocoa,	.	.	223 67	
Vegetables,	.	.	1,201 85	
Sundries,	.	.	490 45	
				<hr/> 18,049 24
Amount carried forward,	.	.	.	<hr/> \$45,417 40



<i>Amount brought forward,</i>			\$45,417 40
<b>Clothing and materials: —</b>			
Boots, shoes and rubbers,		\$429 31	
Clothing,		673 83	
Dry goods for clothing and small wares,		356 83	
Furnishing goods,		216 55	
Hats and caps,		2 11	
Leather and shoe findings,		188 11	
			1,866 74
<b>Furnishings: —</b>			
Beds, bedding, table linen, etc.,		\$830 44	
Brushes, brooms,		47 92	
Carpets, rugs, etc.,		74 51	
Crockery, glassware, cutlery, etc.,		249 92	
Furniture and upholstery,		176 35	
Kitchen furnishings,		164 75	
Wooden ware, buckets, pails, etc.,		59 23	
Sundries,		7 21	
			1,610 33
<b>Heat, light and power: —</b>			
Coal,		\$5,361 67	
Freight on coal,		32 61	
Gas,		94 42	
Oil,		70 40	
			5,559 10
<b>Repairs and improvements: —</b>			
Cement, lime and plaster,		\$19 00	
Electrical work and supplies,		179 56	
Hardware,		262 45	
Lumber,		22 21	
Machinery, etc.,		349 15	
Paints, oil, glass, etc.,		384 08	
Plumbing, steam fitting and supplies,		189 74	
Sundries,		190 94	
			1,597 13
<b>Farm, stable and grounds: —</b>			
Blacksmith and supplies,		\$97 61	
Carriages, wagons, etc., and repairs,		141 50	
Fertilizers, vines, seeds, etc.,		1,704 01	
Hay, grain, etc.,		1,045 73	
Harnesses and repairs,		4 84	
Automobile supplies,		94 25	
Live stock,		5 00	
Tools, farm machines, etc.,		99 59	
Sundries,		515 75	
			3,708 28
<b>Miscellaneous: —</b>			
Books, periodicals, etc.,		\$47 94	
Chapel services,		695 00	
Entertainments,		135 94	
Freight, expressage and transportation,		540 86	
Funeral expenses,		15 00	
Gratuities,		25 51	
Hose, etc.,		17 44	
<i>Amounts carried forward,</i>		\$1,477 69	\$59,758 98

Amounts brought forward, . . . . \$1,477 69 \$59,758 98

Miscellaneous — *Con.*

Ice, . . . . .	331 23	
Medicines and hospital supplies, . . . .	1,510 26	
Medical attendance, nurses, etc. (extra), .	6 00	
Manual training supplies, . . . . .	120 43	
Postage, . . . . .	127 97	
Printing and printing supplies, . . . .	94 06	
Printing annual report, . . . . .	79 38	
Soap and laundry supplies, . . . . .	707 40	
Stationery and office supplies, . . . .	260 28	
School books and school supplies, . . . .	269 66	
Travel and expenses (officials), . . . .	458 61	
Telephone and telegraph, . . . . .	323 61	
Water, . . . . .	812 55	
Sundries, . . . . .	227 34	
		6,806 47
Total expenses for maintenance, . . . .		\$66,565 45

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1911, . . . . .		\$47,264 81
Appropriations for fiscal year, . . . . .		10,000 00
Total, . . . . .		\$57,264 81
Expended during the year (see statement annexed),	\$25,620 86	
Reverting to treasury of Commonwealth, . . .	4 99	
		25,625 85
Balance Nov. 30, 1912, . . . . .		\$31,638 96

RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$3,029 44	
November cash vouchers (paid from advance money): —		
Maintenance, . . . . .	\$1,638 41	
Specials, . . . . .	632 15	
		2,270 56
Due from treasury of Commonwealth account		
November, 1912, schedule, . . . . .	1,196 76	
		\$6,496 76

*Liabilities.*

Schedule of November bills, . . . . .	\$6,496 76
---------------------------------------	------------

PER CAPITA.

During the year the average number of inmates has been 228.56.  
 Total cost for maintenance, \$66,565.45.  
 Equal to a weekly per capita cost of \$5.57.  
 Receipts from sales, \$121.69.  
 Equal to a weekly per capita of \$0.010.  
 All other institution receipts, \$38,558.05.  
 Equal to a weekly per capita of \$3.226.

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Prisons and hospitals loan fund, . . . . .	Acts 1904, chap. 446	\$300,000 00	\$6,633 11	\$282,349 06	\$17,650 94
Assembly hall, . . . . .	{ Res. 1911, chap. 148	20,000 00	} 15,941 00	16,011 98	13,988 02
	{ Res. 1912, chap. 63	10,000 00			
New barn, etc., . . . . .	Res. 1911, chap. 148	6,000 00	3,046 75	5,995 01	4 99 <sup>1</sup>
		\$336,000 00	\$25,620 86	\$304,356 05	\$31,638 96

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

WARREN A. MERRILL,  
*Assistant Supervisor of Accounts.*

## LAWS RELATING TO THE MASSACHUSETTS HOSPITAL SCHOOL.

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ACTS OF 1904, CHAPTER 446.

### AN ACT TO ESTABLISH THE MASSACHUSETTS SCHOOL AND HOME FOR CRIPPLED AND DEFORMED CHILDREN.

*Be it enacted, etc., as follows:*

SECTION 1. The governor, with the advice and consent of the council, shall appoint five persons who shall constitute the Board of Trustees of the Massachusetts School and Home for Crippled and Deformed Children, the purpose of which shall be the education and care of the crippled and deformed children of the commonwealth. The trustees shall hold office for terms of one, two, three, four and five years, respectively, beginning with the first Monday of December in the present year, and until their respective successors are appointed and qualified; and previous to the first Monday in December in each year thereafter the governor shall in like manner appoint one such trustee to hold office for the term of five years, beginning with the first Monday in December of the year of his appointment, and until his successor is appointed and qualified. Any such trustee may be removed by the governor, with the advice and consent of the council. Any vacancy occurring in said board shall be filled in like manner for the unexpired term.

SECTION 2. The lands held by said trustees in trust for the commonwealth for the use of said school and home, as hereinafter provided, shall not be taken for a street, highway or railroad without leave of the general court specially obtained.

SECTION 3. The trustees shall be a corporation for the same purposes for which the trustees of each of the state insane hospitals are made a corporation by section twenty-three of chapter eighty-seven of the Revised Laws, with all the powers necessary to carry said purposes into effect.

SECTION 4. The trustees shall select a site for the school and home; and shall have power to purchase land therefor, subject to

the approval of the governor and council, and to erect on such land suitable buildings to hold not less than three hundred children and the officers, employees and attendants, and to provide for the equipment and furnishing of said buildings: *provided, however*, that the expenditure for carrying out the purposes of this act shall not exceed three hundred thousand dollars. No expenditure shall be made for the erection of buildings except for plans therefor, until the plans have been approved by the governor and council, and no such approval shall be given unless the governor and council shall be satisfied that the cost of the real estate and the erection and completion of buildings and the equipment and furnishing of the same, so as to be ready for occupancy, will not exceed three hundred thousand dollars. The trustees shall have authority to make all contracts and employ all agents necessary to carry into effect the provisions of this act.

SECTION 5. The trustees shall have the same powers and shall be required to perform the same duties in the management and control of the said school and home, as are vested in, and required of, the trustees of the various state insane hospitals under chapter eighty-seven of the Revised Laws, so far as said chapter is applicable.

SECTION 6. When the buildings constructed under the provisions of this act are so far completed that in the opinion of the trustees they may properly be used for the purposes of the school and home, the trustees shall notify the governor, who shall thereupon issue his proclamation establishing the school and home.

SECTION 7. After the establishment of the school and home the trustees shall receive no compensation for their services, but they shall be reimbursed from the treasury of the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 8. The trustees may appoint, and, subject to the approval of the governor and council, may fix the salaries of all persons necessary for the proper administration of the affairs of the school and home, and may incur all expenses necessary for the maintenance of the school and home.

SECTION 9. The charges for the support of the children of the school and home who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school and home. The

board of such children as have a legal settlement in some city or town shall be paid by such city or town if such children are received at the school and home on the request of the overseers of the poor of such city or town. The trustees may in their discretion receive other children who have no means to pay for tuition and board; and the tuition and board of all such children shall be paid from the treasury of the commonwealth.

SECTION 10. There shall be a thorough visitation of the school and home by two of the trustees thereof monthly, and by a majority of them quarterly, and by the whole board semi-annually, and after each visitation a written report of the state of the institution shall be drawn up, which shall be presented at the annual meeting to be held in December. At the annual meeting the trustees shall make a detailed report of their doings to the governor and council, and shall audit the report of the treasurer, which shall be presented at said annual meeting, and transmit it with their annual report to the governor and council.

SECTION 11. The accounts and books of the treasurer shall at all times be open to the inspection of the trustees.

SECTION 12. The state board of charity shall have general supervision of said school and home, and may, when so directed by the governor, assume and exercise the powers of the board of trustees of said school and home in any matter relating to the management thereof.

SECTION 13. For the purpose of meeting expenses incurred under the provisions of this act the treasurer and receiver general is hereby authorized, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding three hundred thousand dollars, for a term not exceeding twenty years. Such scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest at a rate not exceeding four per cent. per annum. They shall be designated on the face thereof as the Massachusetts School and Home for Crippled and Deformed Children Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the commonwealth, and the principal and interest shall be paid at the times specified therein in gold coin of the United States or its equivalent; and such scrip or certificates shall be sold and disposed of at public auction, or in such other mode, and at such time and prices, and in such amounts, as the treasurer shall deem best. Such amounts



shall be raised annually by taxation as will be sufficient, with the interest thereon, to pay the interest on the loan and the principal as it falls due.

SECTION 14. This act shall take effect upon its passage. [*Approved June 8, 1904.*]

ACTS OF 1907, CHAPTER 226.

AN ACT TO CHANGE THE NAME OF THE MASSACHUSETTS SCHOOL AND HOME FOR CRIPPLED AND DEFORMED CHILDREN TO THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. The name of the Massachusetts School and Home for Crippled and Deformed Children, established by chapter four hundred and forty-six of the acts of the year nineteen hundred and four, and located in the town of Canton, is hereby changed to the Massachusetts Hospital School.

SECTION 2. This act shall take effect upon its passage. [*Approved March 20, 1907.*]

ACTS OF 1909, CHAPTER 497.

AN ACT RELATIVE TO THE CARE OF CERTAIN CHILDREN AT THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. Chapter four hundred and forty-six of the acts of the year nineteen hundred and four is hereby amended by striking out section nine and inserting in place thereof the following: — *Section 9.* The trustees may, upon the written application of any child entitled to receive the benefit of said school, or upon such an application made by a parent, guardian, or person having the legal custody of the child, or by any state or municipal board or official having such custody, admit such child to said school, subject to such rules and regulations as the trustees may prescribe, and the trustees may at their discretion discharge such child from the school. The charges for the support of the children of the school who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school. The board of such children as have a legal settlement in some city or town shall be paid by such city or town at a rate not exceeding four dollars a week,



notice of the reception of the children by the trustees being given by them to the overseers of the poor of the city or town of settlement as soon as is practicable; and the tuition and board of those having no such settlement shall be paid by the commonwealth. The trustees may in their discretion receive other children who have no means to pay for tuition and support, and the tuition and board of all such children shall be paid from the treasury of the commonwealth. The attorney-general and district attorneys shall upon request bring action to recover said charges in the name of the treasurer and receiver general. Such charges as are paid by the commonwealth, or by any city or town, shall not be deemed to have been paid as state or pauper aid, and no person shall be deemed to be a pauper in consequence of his inability to pay for the support of a child in said school. The admission of a child as aforesaid to the school shall be deemed a commitment of the child to the care and custody of the commonwealth, and the trustees, with the approval of the state board of charity, may in their discretion detain the child at said school during its school age, or for such longer period during its minority as in the opinion of the trustees will tend to promote the education and welfare of the child.

SECTION 2. This act shall take effect upon its passage. [*Approved June 15, 1909.*]

SIXTH ANNUAL REPORT

OF

THE TRUSTEES

OF THE

MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),

AT CANTON,

FOR THE

YEAR ENDING NOVEMBER 30, 1913.



BOSTON:

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1914.

APPROVED BY  
THE STATE BOARD OF PUBLICATION.

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# OFFICERS

## OF THE

### MASSACHUSETTS HOSPITAL SCHOOL.

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#### TRUSTEES.

EDWARD H. BRADFORD, M.D., <i>Chairman</i> ,	.	.	.	BOSTON.
LEONARD W. ROSS, <i>Secretary</i> ,	.	.	.	BOSTON.
ALFRED S. PINKERTON,	.	.	.	WORCESTER.
WILLIAM F. FITZGERALD,	.	.	.	BROOKLINE.
WALTER C. BAYLIES,	.	.	.	TAUNTON.

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#### RESIDENT OFFICERS.

JOHN E. FISH, M.D.,	.	.	.	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.,	.	.	.	<i>Assistant Physician.</i>
E. VICTOR KELLER, M.D.,	.	.	.	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	.	.	.	<i>Clerk.</i>
ALICE M. MACADAM,	.	.	.	<i>Supervisory Nurse.</i>
RUTH PARK,	.	.	.	<i>Head Teacher.</i>
LILLIAN S. SWIMM,	.	.	.	<i>Housekeeper.</i>
SAMUEL C. ROGERS,	.	.	.	<i>Engineer.</i>
JESS BLACK,	.	.	.	<i>Farmer.</i>

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#### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
ROBERT SOUTTER, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
JOHN LOVETT MORSE, M.D.,	.	<i>Physician, Department of Diseases of Children.</i>
JAMES S. STONE, M.D.,	.	<i>Surgeon, Department of General Surgery.</i>





# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

The Board of Trustees, in presenting the sixth annual report of the State Hospital School, desire to call attention to the satisfactory completion of the work of establishing the school, begun under the act of the Legislature in the year 1904.

It will be recalled that the original grant of \$300,000 contemplated the establishment of a home, a hospital and a school for 300 crippled children, with the purpose not only of caring for and nursing children unable to obtain such care at their homes but also of educating them during the period of their dependency, in the hope that they might become either self-supporting and no longer a burden to the community, or able to contribute to their own support, thereby lifting them from the condition of hopeless pauperism to self-respecting manhood. The amount of money was not large in comparison with what has been given for similar purposes by private benefactors elsewhere, and the need of economy prevented any waste through useless undertaking of an experimental nature. This might seem unavoidable, owing to the lack of satisfactory example from existing similar institutions, inasmuch as the one planned by our Commonwealth differs from the European and other institutions for the care of cripples in the scope of the work and in a contemplated combination of a school and hospital, with equal attention paid to physical condition and mental training.

Such a school must differ from the ordinary public schools as many of the pupils are unable to bear the strain of the usual curriculum, and the hospital should be arranged to interfere as little as possible with the routine of the school.

Under unwise organization the institution might degenerate with the condition of a mere institutional home, or a cripples' hospital, simply temporarily meeting the physical need of a dependent class. It was the earnest endeavor of the Board of Trustees to avoid both of these dangers and to plan for an all-round institution capable of carrying out fully the original design.

After a working plan was decided upon, it was determined to build at first only a portion of the institution and be guided by experience in the construction of the remaining portion. In this way the Board has been able to complete the work undertaken within the original appropriation, finally providing accommodation for 300 children, in spite of marked increased cost of material and labor, by building a cottage for girls already under construction. It may also be claimed that the working of the institution as shown in the past years demonstrated not only the need of such an institution but also that, under the existing organization and administration, most satisfactory results may be obtained with a minimum outlay of money.

It may be of interest to call attention to some of the benefits derived from the institution as at present administered.

The advantages to the pupils from their stay at the school as shown in the last six years may be mentioned as follows: 1, improvement in health; 2, improvement in educational training; 3, development of character and fitting for bread-winning occupations.

### 1. IMPROVEMENT IN HEALTH.

Crippled children are of two classes, first, those suffering from disabilities of a more or less temporary nature and, second, those permanently disabled.

Improvement in health was observed in both of these classes. The first consists largely of those suffering from the results of bone and joint tuberculosis, *i.e.*, hip disease, diseases of the spine, etc., and need the tonic of fresh air as an antidote to their tuberculous tendency. The second, largely those of congenital deformities or suffering from infantile or other forms of permanent paralysis, need fresh-air treatment for

the improvement of their general health, deprived as they have been of the healthful activities of childhood with their benefits from fresh air. In order to secure this for the children of both of these classes, it is necessary to furnish their dormitories with such arrangements for ventilation as would enable them to have pure fresh air at night as well as during the day. If the wards of most hospitals are visited at midnight or later, it will almost invariably be found that the ward air is close and less fresh than the outdoor air. As all systems of ventilation are expensive, it was determined to equip the dormitories with monitor roof ventilation. This and the prescribed daily outdoor life has given all children at the school the benefit of uncontaminated air summer and winter. The resulting improvement of the children's health has been marked, so much so that their general condition is noticeably better than that of their brothers and sisters who have lived at home. There has been a marked freedom in the hospital from contagious epidemics from tonsilitis and from ordinary colds. As a test of its hygienic condition, the school was visited by one epidemic of a contagious disease, namely, measles, which was brought to it by a nurse returning from Boston. This, however, although attacking a school filled with children below the normal physical standard, was controlled, and was followed by no serious results.

## 2. EDUCATIONAL METHODS.

It was decided that the educational opportunities at the school should be of the primary grade with special opportunities for industrial training, in the hope of developing by industrial education any special aptitude remaining in disabled children. The industrial education of a legless child would necessarily differ from that of a child disabled in both arms, and this industrial training should be emphasized as soon as the child has received adequate education in the fundamental knowledge given in the primary course.

It was also found necessary to adapt the hours of study to the physical condition of the children. A child with a tubercular tendency or delicate organization should be subjected to the school restraint a shorter time than may be possible in

the ordinary school. The school sessions were arranged out-of-doors with simply canvas protection from rain. It was found that children subjected to a curriculum of this character were advanced as rapidly as by the ordinary public school sessions, demanding longer hours of instruction and restraint, with a marked improvement in their general condition.

*Industrial Training.* — This has been conducted along certain lines with the purpose of emphasizing practical rather than theoretical training. Dressmaking, farming, gardening, cobbling, carpentry, cooking, housework, laundry work, steam fitting, plumbing, painting, typewriting and office work have all been taught as a part of the daily instruction of the older children.

*Play.* — The educational value of play has been utilized by the development of sports, including baseball and such outdoor activities as were possible to cripples. The usual success of the baseball team, played by partially paralyzed or even legless children using artificial limbs, in competition with the healthy boys of the neighborhood, was a marked tribute to the introduction of team work and training. A brass band, with musical instruction, and a guitar club for the girls developed musical talent and helped the discipline of the school.

### 3. DEVELOPMENT OF CHARACTER AND FITTING FOR BREAD-WINNING OCCUPATIONS.

When it is remembered that a large number of children first placed in the school were taken from almshouses, with inheritances which may certainly be said to be of a character that would discourage advocates in eugenics, the result of the training and future career of any of the pupils of the school is of great interest. Although the work of the school has been in operation only a short time, enough has been shown to illustrate in many cases unusual results under most unpromising conditions. This has been shown by the development of character and the obtaining by a few graduates of the school good bread-winning positions. The records of the school will show what may be considered surprising results in this particular.

The assembly hall, erected by a special grant of the Legisla-

ture, has proved itself of great value for educational, religious and social purposes in improving the activities and social work of the school.

The barn, which has already been finished, and the cow barn, which is nearly done, will be able to accommodate sufficient cows to furnish the school its own milk supply, — a matter of great importance in protecting the health of the school.

Previous reports have referred to the growing need in our State of trained farm attendants, and experience has shown that practical training in agricultural pursuits is especially desirable for certain pupils coming from country districts as well as for those who should lead an outdoor life. Many crippled boys, if properly trained, may successfully perform various kinds of farm work. It should also be borne in mind that an institution for children should not be entirely dependent upon the market for its milk supply. The school will soon be able to care for a small herd of cows in the cow barn which has been in process of construction during the past summer and is now nearing completion. A small building with the necessary apparatus for the proper care of milk, the cleansing of utensils, and the purchase of such articles as cannot be regarded as items of maintenance, will cost approximately \$1,000, and the sum of \$2,700 should be appropriated for a dairy equipment and the purchase of cows.

The important question of improved water supply is still under consideration. Realizing the uncertainty of being able to procure an adequate supply of water from wells drilled into bed rock for the present and prospective needs of the school, we deemed it advisable to make a determined effort to secure a supply from some other source. Negotiations were entered into with the owners of Reservoir Pond, so called, which our land adjoins, for its purchase outright, or the right to pump a supply therefrom. Owing to its value to the owners as a source of power for the use of their mills in Canton, its purchase was impossible with the amount of money available, and its value placed by the owners so high that we were unwilling to recommend a further appropriation sufficient to buy it.

After securing permission of the several owners of near-by land, test borings were made, with the results stated in the



report of our superintendent. Having located an apparent supply, its distance from the school and the difficulties to be met in its delivery to our service pipes are so great that we have determined to begin work at once upon bed rock drilling.

The Board wishes to express its high appreciation of the work of its superintendent, who has intelligently met the problems which have been presented to him and brought the institution to a high state of efficiency.

Respectfully submitted,

EDWARD H. BRADFORD.

LEONARD W. ROSS.

ALFRED S. PINKERTON.

WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

---

*To the Trustees of the Massachusetts Hospital School.*

I hereby submit the sixth annual report of the Massachusetts Hospital School for the year ending Nov. 30, 1913.

Four hundred and sixty-five children have been cared for since Jan. 14, 1908, when the first child was admitted.

There were in the school Dec. 1, 1912, 228, — 146 boys and 82 girls, exclusive of 10 children who were temporarily absent on visit.

There have been admitted during the year 57, — 33 boys and 24 girls. The whole number under treatment was, therefore, 295. The largest number at any one time was 257, the smallest, 202, and the daily average 235.83. Forty-five children were discharged, of whom 35 were boys and 10 girls, leaving at the close of the year 250, — 153 boys and 97 girls.

*The Admissions.* — The average age on admission was seven years, eleven months as compared with nine years, ten months in 1912. Of the 57 children received, 26 were suffering from tuberculosis of the joints or bones, 17 from some form of paralysis and 14 from rickets, malnutrition and deformities of various kinds. As a class, the children have been much more amenable to orthopedic treatment and decidedly keener mentally than the surgically helpless and feeble-minded patients who were naturally numbered among our first admissions from other institutions. The number of girls has also relatively increased, and the waiting list of applicants gives promise that we may eventually have about an equal number of both sexes.

*The Discharges.* — There were 45 discharges, of whom 24, or 53 per cent., after an average residence of one hundred and sixty-four weeks, were either capable of self-support or recovered so that they could be classed with normal children.

Nine were feeble-minded and should never have been certi-



fied as mentally competent; 7 were taken against advice for various reasons, — such as a mother longing to have her child at home, fear of surgical operation, and pride of parents unable to reimburse the place of settlement for board. One hopelessly and almost completely paralyzed boy, having been taught to read and get some enjoyment in life, was discharged as unpromising for further advancement. Two patients died, — one of chronic nephritis, amyloid degeneration and organic disease of the heart; the other of tuberculous meningitis following extensive spinal tuberculosis.

The occupations in which the discharged pupils are capable of self-support are: clerical and telephone operator, 1 boy; steam laundry assistants, 2 boys; cooking and domestic work, 2 girls; messenger, 1 boy; carpenter and operator of wood-working machines, 1 boy; cobbling and leather work, 1 boy; farming and gardening, 2 boys. Five of the self-supporting cases were graduated from the grades and have the school diploma; the others either recovered before completing our prescribed course or, having passed the compulsory school age, were thought to be better suited for vocational effort than for further study in school.

There has been but little difficulty in finding an opportunity for our pupils to be given a trial at self-support. It seems probable, however, that as the number increases some step should be taken toward the establishment of a system through which the economic independence of certain handicapped graduates could be assured. With the co-operation of a directing agency in different sections of the State, the school could train its pupils more definitely for the industrial opportunities in the districts into which they are most likely to go.

There have been no changes in the medical staff, and the present members have been able to follow to a happy termination the long continued nonoperative treatment which enables many bedridden and wheel-chair cases to walk about with crutches. There has been less general sickness and the health record for the year has been excellent. The routine medical and surgical work, however, has been heavy because of the large number of plaster of Paris, splint and apparatus cases, and an outbreak of measles in the early summer. At

the close of the year 179 patients were wearing braces, splints, or apparatus of some form, of whom 22 required daily surgical dressings. On May 17 a relief nurse sought medical advice for symptoms which she regarded as due to a cold and sore throat. She was immediately isolated in her own bedroom at the domestic science cottage, which was quarantined with all its occupants, including a nurse and 14 girls. Investigation showed that she had not been away from the institution for more than three weeks, except on May 6, when she went to Boston eleven days previous to her asking medical advice. She developed all the characteristic symptoms of measles. Every individual in the institution was kept under close observation and systematically examined for throat and other early symptoms of the disease. Eleven days following the quarantine precautions at the domestic science cottage, a boy at the east dormitory, where the relief nurse had never been employed, showed suspicious symptoms of measles and was promptly isolated. He remembered having passed the relief nurse out-of-doors about two weeks previously at a distance of some 12 or 15 feet. In an equally mysterious way 57 cases of measles followed; but timely isolation and quarantine prevented a more extensive epidemic. The boys' cottage was reserved for the cases which extended over a period of twelve weeks, three days. All cases made complete and uncomplicated convalescence. Photographic and X-ray records have been much improved, and case histories more carefully systematized. A daily record has been made of each child in the institution, so that definite results can now be tabulated for study. The consulting orthopedic surgeons have given their time most generously without thought of money and have made a surgical record of every child at entrance and at subsequent examinations.

The dentist's report shows 334 appointments, resulting in 490 operations as follows: 80 amalgam fillings; 36 cement fillings; 6 gutta percha fillings; 102 extractions; 9 examinations; 17 root fillings; 72 treatments; and 168 cleanings. In order that each child may have a dental examination at least twice each year, arrangement should be made for the dentist to visit two days weekly.

*School.* — The increase in the number of pupils taking classroom work has made necessary the employment of an additional teacher and the opening of another classroom. Our subprimary, first, second and fifth, grades are so large that it is necessary to make two divisions of each. The hours are as in former years, from one hour in the subprimary divisions to two hours for some of the upper grades. Most of the classes have one and one-half hours a day. All our school work is done in the open air, in the sense that windows in the two inside rooms are kept constantly open to as great an extent as the weather permits, while the outside rooms are occupied throughout the year. There is an increasing number of pupils who for some reason, such as long-continued absence from class through illness, are unable to take the work of their regular grade, and I would recommend that an ungraded division be formed with another teacher at an early date.

The opening of the assembly hall and library has added new interest to the lives of the children. On the opening evening an entertainment entirely by school talent was presented. There was a three-act farce, music by the band and some of the pupils in the vocal music class.

A number of entertainments, both by local and non-resident talent, have been given throughout the year. The boys and girls have appeared in several plays, and a black-face minstrel show was presented at the close of the summer term.

In April, through the courtesy of the superintendent of the Wrentham State School, a group of about 50 pupils from that institution gave an operetta under the leadership of their efficient teachers.

The library is opened daily under the supervision of some member of the teaching staff, both for the distribution of books and for a reading room. An effort is being made to co-ordinate the work of the school with that of the library.

The band has gained increasing skill during the past year, and has, with great credit to the school, furnished music at the Ponkapoag fair and picnics, to which a large number of our children have been given complimentary admission.

An interesting addition to the musical life of the school is the mandolin and guitar club, which was made possible by the

gift of a friend who gave a set of instruments at Christmas time. The 13 girls of the club are receiving instruction weekly, and hope soon to give as much pleasure to their hearers as do the boys of the band.

A lively interest in baseball has been maintained, games having been played nearly every Saturday afternoon with normal boys of this and adjoining towns. By superior team play and nature's law of compensation, our boys were able to finish the season with a high average of victories.

All the holidays have as heretofore been appropriately observed. July 4 was celebrated by athletic sports in the forenoon, a picnic on the lake shore given in the afternoon, and a display of fireworks in the evening.

The Hallowe'en celebration was given in two parts, — a sunlight party for the younger pupils and an evening gathering for those in the upper grades.

Thanksgiving Day was given a most homelike touch at the domestic science and farm cottages when the girls and boys had the pleasure of helping to prepare as well as to eat their dinner.

Christmas, long anticipated and thoroughly absorbing, is always made the crowning event of the year.

The class of 1913 though small in numbers had the honor of being the first to use the assembly hall for its graduating exercises in June. An interesting feature of the event was the presence of several former pupils, some who are now self-supporting and others who are engaged in further study. They spoke briefly and helpfully of their experiences since leaving the school. The band furnished music and the hall was decorated with the school colors. The class motto — "Labor Conquers All Things"—hung above the stage. Some members of the class have already demonstrated in the life of the world the motto of their choice.

Specialized training with a view to wage earning has increased with the growth of the school and has been carried on uninterruptedly with the vast majority of the children, and especially with the older ones. The necessary work in and about the institution requires the services of many skilled employees who, when judiciously selected, trained and super-



vised, become the most efficient, practical instructors. The intimate daily relationship which exists between practically all employees and the children renders it possible to extend our educational methods far beyond the scholastic instruction of the classroom. Under close medical direction children have been encouraged to assist in the various departments, but their productive effort has been wholly upon a voluntary basis and directed by other influences than those of authority. In this way, as well as by observation in the grades, the developing intelligence of each child has been estimated, and industrial classes organized in accordance with probable capacity for future self-support.

The cow barn for which \$3,000 was appropriated, Resolves of 1913, chapter 38, is being shingled by two boys in the carpentry class, and the glass for its seventy-two windows is being set by another boy who has become much interested in work at the paint shop.

The foundations for another cottage for girls have been laid, steam, water and sewer tunnels completed, and it is hoped to get the building closed in before cold weather. The building is similar to the boys' cottage and designed to accommodate 30 girls and 2 employees. With its completion we shall be able to accommodate 300 children and the necessary officers and employees, in accordance with chapter 446 of the Acts of 1904. Since the original appropriation of \$300,000 was made, the shorter hours of labor have necessitated the employment of more help than was then anticipated. Wages have also materially increased, and there has been a decided advance in the cost of lumber and building materials. It is somewhat doubtful, therefore, whether the cow barn and cottage can be completed within the amounts appropriated, although every effort is being made to do so.

Test wells have been driven for the purpose of determining the nearest point at which an adequate water supply could be found. Because of the great uncertainty as to depth and yield of artesian wells, it was deemed advisable to ascertain first whether surface water, which was absent on our own property, could not be found elsewhere within reasonable distance, and of sufficient quantity and quality for our needs.

Three tests were made on the Tolman farm, about one-half mile east of our boiler house and near Reservoir Pond, with the following results: No. 1, 34 feet deep, no water; No. 2, 21½ feet deep, 5 gallons of water per minute; No. 3, 16 feet deep, 4 gallons of water per minute. All wells were driven to bed rock, and the formation throughout was found to be fine sand clay, almost hard pan.

We then went to the Gibson property, about one-third of a mile from our east line, where one well to bed rock revealed 9 feet of muck and 10 feet of hard pan, but no water. We then made two tests on the Shaw place, about one-fourth mile east of the tests on the Tolman farm, one, 24 feet 2 inches, and the other, 11 feet deep. In both cases the muck was 8 feet deep, and the second test was discontinued for that reason. The first well showed a yield of 40 gallons per minute, but the quality on account of the muck was undesirable.

We then made three tests on the Deane place on Turnpike Street; No. 1 was 16 feet deep and yielded 30 gallons per minute; No. 2 was 15 feet deep and yielded 40 gallons per minute; No. 3 was 26 feet deep and there was no water below 13 feet. The formation was mostly coarse sand and gravel, no muck or clay showing.

On account of the shallowness of the wells on the Deane property and the distance of piping, which could not be done within the sum appropriated, it now seems advisable to try to procure a deep water supply on our own property near the power plant.

The farm land has been improved by plowing and clearing of stones, which are gradually diminishing each year, and about 3 acres of wild land which have been made ready for tillage next season.

The water commissioners were again obliged to prohibit the use of water on lawns and gardens during July and August, and all crops suffered in our dry soil, while many young winter vegetable plants were a complete failure. Our tables were bounteously supplied, however, and with the independent water supply we hope to have installed before another season, it is probable that we can grow all the green and winter vegetables necessary for our use.

There have been 6,398 pounds of pork dressed, and the following crops harvested:  $3\frac{1}{2}$  tons hay, 2 tons rye straw, 20 tons ensilage, 547 bushels potatoes, 167 bushels beets,  $74\frac{1}{2}$  bushels turnips, 95 bushels carrots, 61 bushels mangels, 16 bushels parsnips, 5 bushels lettuce, 7 bushels radishes, 61 bushels horse carrots,  $11\frac{1}{2}$  bushels peas, 38 bushels string beans, 984 dozen ears sweet corn, 28 bushels ripe tomatoes,  $6\frac{1}{2}$  bushels green tomatoes, 20 bushels spinach,  $9\frac{1}{2}$  bushels beet greens,  $2\frac{1}{2}$  bushels cucumbers, 6 bushels onions, 79 heads early cabbage, 630 heads stone mason cabbage, 535 heads Wakefield cabbage, 300 heads red cabbage, 6 bushels parsley.

For the first time since the school was established it seems probable that nurses of our own training are better qualified to supervise and direct the routine ward work than nurses from other institutions, where neither training nor experience in the care of ambulatory orthopedic patients and adolescent boys and girls is given. Our own nurses are not, however, sufficiently skilled in operating room technique to meet surgical emergencies which may arise, and I believe it is now advisable to introduce some systematic training and instruction for our nurses, not only as a means of developing the most competent ward service possible but also that long and efficient devotion to the work may be recognized by the giving of a certificate of training.

In the belief that it is now time to again change our organization to keep pace with our growth and to meet present requirements, appointments were not made to fill the vacancies caused by the retirement at the close of the year of Miss Blanche B. Pulsifer and Mrs. Agnes R. Gay, who rendered creditable service as head nurses.

Miss Alice MacAdam, one of our most energetic assistant nurses for nearly five years, was appointed supervisor, and candidates are being considered for a new position, that of nurse to act as executive assistant and teacher in the nursing department.

Mr. William H. Coffin resigned as chief engineer, after two years and seven months of most loyal and efficient service, to accept a more desirable position nearer his family, and he was succeeded by Mr. S. C. Rogers, who comes highly recommended.



Miss Mary W. Wentworth, our most conscientious and dependable clerk since the opening of the institution, was obliged to retire in August on account of ill health, and the vacancy thus caused was most acceptably filled by the temporary appointment of Miss Harriet R. Burwell.

Mrs. Lillian S. Swimm, with another long record of meritorious service, was advanced to take Miss Burwell's place as housekeeper.

With our workmen engaged in the erection of new buildings, the many extraordinary repairs made necessary by the imperfections in the original buildings have been carried on as rapidly as possible. Both the east and west dormitories have been sheathed below the chair rails, a large portion of the inferior plastering replaced with new and given two coats of lead and oil paint. A retaining wall has been built on either side of the steam mains leading from the boiler room to the east dormitory, and a granolithic walk leading to the laundry and connecting with the engine room stairs has been completed. Several rooms in the administration building have been refinished, and much outside painting done.

There are many changes to be made in the storerooms and refrigerators if we are to accommodate more than 300 children, as now seems likely, and it is probable that a separate small building to be used as a bakery, and located between the kitchen and industrial building, will be found to be the best solution of providing more room for refrigeration. Another growing need is a school building, as the present accommodations are rapidly becoming inadequate. The east dormitory could be utilized as a school building with practically little change, and the boys now quartered there very much better cared for in two cottages of thirty beds each.

The cow barn which has been in process of construction during the past year will be ready for use in the spring, and I would recommend that you ask for an appropriation of \$2,700 for the purchase of cows and dairy equipment.

The demand for our annual reports from physicians, school superintendents, social workers and the like has always been far in excess of the number provided under the law.

Of the 1,000 copies printed, we are allowed but 100, and I would also recommend that you ask for legislation which will

permit the printing of 2,500 copies. The additional expense would be but slightly more than the cost of the paper.

Maintenance expenses for the year amounted to \$68,807.94, which divided by the daily average number of children, 235.83, gives a weekly per capita cost of \$5.59.

In considering the per capita cost of maintenance it should be borne in mind that many of our children enjoy short vacations at home, the number making visits for the year being 204, representing 2,049 days absent, which materially affects our daily average number without proportionately changing the cost of maintenance.

The cost of maintenance would have been somewhat higher but for the failure of the contracting coal company to deliver our estimated year's supply of coal before December 1, causing an unexpended balance for coal to be returned and included in our estimates for another year, which should make our 1914 maintenance correspondingly higher.

A most pleasant feature of the work throughout the year has been the interest and hearty co-operation of the officers and employees who have cheerfully given much voluntary service and to whom I wish to express my grateful appreciation.

Respectfully submitted,

JOHN E. FISH,

*Superintendent.*

## TERMS OF ADMISSION.

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Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations on the New York, New Haven & Hartford Railroad.

Post-office address, Canton, Mass.

Applications for admission should be made to the superintendent.

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	48	7	8
Other New England States, . . . . .	1	2	—
Other States, . . . . .	2	5	4
Total native, . . . . .	51	14	12
Other countries:—			
Canada, . . . . .	1	2	1
England, . . . . .	—	—	3
Ireland, . . . . .	—	12	12
Italy, . . . . .	1	6	6
Newfoundland, . . . . .	1	8	6
Portugal, . . . . .	—	1	1
Poland, . . . . .	1	1	1
Russia, . . . . .	—	5	5
Scotland, . . . . .	—	1	2
Sweden, . . . . .	—	1	1
Total foreign, . . . . .	4	37	38
Unknown, . . . . .	2	6	7
Totals, . . . . .	57	57	57

## DISABILITY ON ADMISSION.

	Boys.	Girls.	Totals.
Amputation of leg above knee, . . . . .	1	—	1
Amputation of both legs above knees, . . . . .	1	—	1
Congenital deformity of spine, . . . . .	—	1	1
Congenital dislocation of hip, . . . . .	—	2	2
Multiple joint disease, . . . . .	1	—	1
Osteomyelitis, . . . . .	1	—	1
Paralysis, infantile, . . . . .	5	7	12
Paralysis, spastic, . . . . .	2	1	3
Progressive muscular dystrophy, . . . . .	1	—	1
Rachitic deformity, . . . . .	1	7	8
Scoliosis, . . . . .	—	1	1
Tuberculous disease of ankle, . . . . .	1	—	1
Tuberculous disease of hip, . . . . .	6	4	10
Tuberculous disease of knee, . . . . .	1	—	1
Tuberculous disease of spine, . . . . .	10	2	12
Undiagnosticated, . . . . .	1	—	1
Totals, . . . . .	32	25	57

## VALUATION.

Nov. 30, 1913.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building, two dormitories and power house, . . . . .	147,184 08
Infirmery, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,440 33
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	2,194 55
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn, . . . . .	2,370 28
Three isolation houses, . . . . .	751 00
Goat house and henhouse, . . . . .	280 00
Four portable hog cots, . . . . .	200 00
Shop, . . . . .	150 00
Granolithic walks, . . . . .	2,370 06
<hr/>	
Total, . . . . .	\$264,596 40

## PERSONAL PROPERTY.

Food, . . . . .	\$2,693 17
Clothing, . . . . .	1,368 72
Furnishings, . . . . .	22,941 27
Heat, light and power, . . . . .	8,497 47
Repairs and improvements, . . . . .	3,843 40
Farm, stable and grounds, . . . . .	6,658 26
Miscellaneous, . . . . .	5,473 44
<hr/>	
Total, . . . . .	\$51,475 73

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1913:—

CASH ACCOUNT.			
Balance Dec. 1, 1912,	.	.	\$3,029 44
<i>Receipts.</i>			
<i>Institution Receipts.</i>			
Board of inmates:—			
Private,	.	\$1,055 92	
Cities and towns,	.	27,148 29	
Reimbursements, charitable			
(State minor wards),	.	11,050 85	
		<hr/>	\$39,255 06
Sales:—			
Repairs and improvements,	.	\$3 81	
Miscellaneous,	.	56 11	
Farm, stable and grounds:—			
Goats,	.	\$46 00	
Pigs and hogs,	.	30 50	
Beverly wagon,	.	12 00	
		<hr/>	88 50
		<hr/>	148 42
Miscellaneous receipts:—			
Interest on bank balances,	.	\$41 89	
Manufactures,	.	6 80	
Sundries,	.	268 25	
		<hr/>	316 94
		<hr/>	39,720 42
<i>Receipts from Treasury of Commonwealth.</i>			
Maintenance appropriations:—			
Balance of 1912,	.	\$1,196 76	
Advance money (amount on November 30),	.	4,300 00	
Approved schedules of 1913,	.	62,760 68	
		<hr/>	68,257 44
Special appropriations,	.	.	23,934 80
			<hr/>
Total,	.	.	\$134,942 10

*Payments.*

To treasury of Commonwealth, institution receipts, . . . . .		\$39,720 42	
Maintenance appropriations: —			
Balance November schedule, 1912, . . . . .	\$4,858 35		
Eleven months' schedules, 1913, . . . . .	62,760 68		
November advances, . . . . .	2,195 45		
			69,814 48
Special appropriations: —			
Approved schedules, . . . . .	\$23,934 80		
Less advances, last year's report, . . . . .	632 15		
		\$23,302 65	
November advances, . . . . .		378 13	
			23,680 78
Balance Nov. 30, 1913: —			
In bank, . . . . .	\$1,632 92		
In office, . . . . .	93 50		
			1,726 42
Total, . . . . .			\$134,942 10

## MAINTENANCE.

Appropriation, . . . . .	\$73,614 00
Expenses (as analyzed below), . . . . .	68,807 94
Balance reverting to treasury of Commonwealth, . . . . .	\$4,806 06

*Analysis of Expenses.*

Salaries, wages and labor: —		
John Euclid Fish, superintendent, . . . . .	\$2,750 00	
General administration, . . . . .	11,071 32	
Medical service, . . . . .	1,460 00	
Ward service (male) (\$17 not on pay roll), . . . . .	2,470 97	
Ward service (female), . . . . .	8,785 32	
Repairs and improvements (\$41.88 not on pay roll), . . . . .	1,764 98	
Farm, stable and grounds (\$18 not on pay roll), . . . . .	1,980 78	
		\$30,283 37
Food: —		
Butter, . . . . .	\$4,023 59	
Lard compound, . . . . .	52 90	
Beans, . . . . .	203 97	
Bread and crackers, . . . . .	33 95	
Cereals, rice, meal, etc., . . . . .	250 33	
Cheese, . . . . .	77 73	
Eggs, . . . . .	1,335 76	
Flour, . . . . .	1,089 81	
Fish, . . . . .	682 25	
Amounts carried forward, . . . . .	\$7,750 29	\$30,283 37



<i>Amounts brought forward,</i>		\$7,750 29	\$30,283 37
<b>Food — <i>Con.</i></b>			
Fruit (dried and fresh),		1,238 65	
Meats,		5,488 12	
Milk,		3,442 37	
Molasses and syrup,		21 92	
Spices, seasonings, salt, etc.,		217 81	
Sugar,		935 47	
Tea, coffee, broma and cocoa,		181 45	
Vegetables,		884 42	
Yeast,		58 75	
Sundries,		105 20	
			20,324 45
<b>Clothing and materials: —</b>			
Boots, shoes and rubbers,		\$324 01	
Clothing,		340 51	
Dry goods for clothing and small wares,		362 64	
Furnishing goods,		108 57	
Leather and shoe findings,		360 81	
			1,496 54
<b>Furnishings: —</b>			
Beds, bedding, table linen, etc.,		\$458 58	
Brushes, brooms,		75 50	
Carpets, rugs, etc.,		108 52	
Crockery, glassware, cutlery, etc.,		289 33	
Furniture and upholstery,		408 34	
Kitchen furnishings,		258 91	
Wooden ware, buckets, pails, etc.,		22 74	
Sundries,		55 88	
			1,677 80
<b>Heat, light and power: —</b>			
Coal,		\$2,802 58	
Freight on coal,		529 01	
Gas,		167 30	
Oil,		57 44	
Sundries,		20 67	
			3,577 00
<b>Repairs and improvements: —</b>			
Brick,		\$13 72	
Cement, lime and plaster,		22 86	
Electrical work and supplies,		332 39	
Hardware,		215 93	
Lumber,		404 28	
Machines (detached),		34 33	
Paints, oil, glass, etc.,		372 99	
Plumbing, steam fitting and supplies,		535 32	
Roofing and materials,		71 30	
Sundries,		90 36	
			2,093 48
<i>Amount carried forward,</i>			\$59,452 64



## RESOURCES AND LIABILITIES.

<i>Resources.</i>		
Cash on hand, . . . . .		\$1,726 42
November cash vouchers (paid from advance money): —		
Account of maintenance, . . . . .	\$2,195 45	
Account of special appropriations, . . . . .	378 13	
	<hr/>	2,573 58
Due from treasury of Commonwealth account of November, 1913, schedule, . . . . .		1,747 26
	<hr/>	\$6,047 26
<i>Liabilities.</i>		
Schedule of November bills, . . . . .		\$6,047 26

## PER CAPITA.

During the year the average number of inmates has been 235.83.

Total cost for maintenance, \$68,807.94.

Equal to a weekly per capita cost of \$5.595.

Receipt from sales, \$148.42.

Equal to a weekly per capita of \$0.012.

All other institution receipts, \$39,572.

Equal to a weekly per capita of \$3.219.

Special Appropriations.

Объект.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Prisons and hospitals loan fund,	. . . . .	Acts 1904, chap. 446	\$8,126 17	\$290,475 23	\$9,524 77
Assembly hall,	{ . . . . . }	Res. 1911, chap. 148	} 13,428 35	29,440 33	559 67
	. . . . .	Res. 1912, chap. 63			
Water supply,	. . . . .	Res. 1913, chap. 38	10 00	10 00	6,990 00
Cow barn,	. . . . .	Res. 1913, chap. 38	2,370 28	2,370 28	629 72
			\$23,934 80	\$322,295 84	\$17,704 16
		\$340,000 00			

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

WARREN A. MERRILL,  
*Assistant Supervisor of Accounts.*

## LAWS RELATING TO THE MASSACHUSETTS HOSPITAL SCHOOL.

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ACTS OF 1904, CHAPTER 446.

AN ACT TO ESTABLISH THE MASSACHUSETTS SCHOOL AND HOME  
FOR CRIPPLED AND DEFORMED CHILDREN.

*Be it enacted, etc., as follows:*

SECTION 1. The governor, with the advice and consent of the council, shall appoint five persons who shall constitute the Board of Trustees of the Massachusetts School and Home for Crippled and Deformed Children, the purpose of which shall be the education and care of the crippled and deformed children of the commonwealth. The trustees shall hold office for terms of one, two, three, four and five years, respectively, beginning with the first Monday of December in the present year, and until their respective successors are appointed and qualified; and previous to the first Monday in December in each year thereafter the governor shall in like manner appoint one such trustee to hold office for the term of five years, beginning with the first Monday in December of the year of his appointment, and until his successor is appointed and qualified. Any such trustee may be removed by the governor, with the advice and consent of the council. Any vacancy occurring in said board shall be filled in like manner for the unexpired term.

SECTION 2. The lands held by said trustees in trust for the commonwealth for the use of said school and home, as hereinafter provided, shall not be taken for a street, highway or railroad without leave of the general court specially obtained.

SECTION 3. The trustees shall be a corporation for the same purposes for which the trustees of each of the state insane hospitals are made a corporation by section twenty-three of chapter eighty-seven of the Revised Laws, with all the powers necessary to carry said purposes into effect.

SECTION 4. The trustees shall select a site for the school and

home; and shall have power to purchase land therefor, subject to the approval of the governor and council, and to erect on such land suitable buildings to hold not less than three hundred children and the officers, employees and attendants, and to provide for the equipment and furnishing of said buildings: *provided, however*, that the expenditure for carrying out the purposes of this act shall not exceed three hundred thousand dollars. No expenditure shall be made for the erection of buildings except for plans therefor, until the plans have been approved by the governor and council, and no such approval shall be given unless the governor and council shall be satisfied that the cost of the real estate and the erection and completion of buildings and the equipment and furnishing of the same, so as to be ready for occupancy, will not exceed three hundred thousand dollars. The trustees shall have authority to make all contracts and employ all agents necessary to carry into effect the provisions of this act.

SECTION 5. The trustees shall have the same powers and shall be required to perform the same duties in the management and control of the said school and home, as are vested in, and required of, the trustees of the various state insane hospitals under chapter eighty-seven of the Revised Laws, so far as said chapter is applicable.

SECTION 6. When the buildings constructed under the provisions of this act are so far completed that in the opinion of the trustees they may properly be used for the purposes of the school and home, the trustees shall notify the governor, who shall thereupon issue his proclamation establishing the school and home.

SECTION 7. After the establishment of the school and home the trustees shall receive no compensation for their services, but they shall be reimbursed from the treasury of the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 8. The trustees may appoint, and, subject to the approval of the governor and council, may fix the salaries of all persons necessary for the proper administration of the affairs of the school and home, and may incur all expenses necessary for the maintenance of the school and home.

SECTION 9. The charges for the support of the children of the school and home who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school and home. The



board of such children as have a legal settlement in some city or town shall be paid by such city or town if such children are received at the school and home on the request of the overseers of the poor of such city or town. The trustees may in their discretion receive other children who have no means to pay for tuition and board; and the tuition and board of all such children shall be paid from the treasury of the commonwealth.

SECTION 10. There shall be a thorough visitation of the school and home by two of the trustees thereof monthly, and by a majority of them quarterly, and by the whole board semi-annually, and after each visitation a written report of the state of the institution shall be drawn up, which shall be presented at the annual meeting to be held in December. At the annual meeting the trustees shall make a detailed report of their doings to the governor and council, and shall audit the report of the treasurer, which shall be presented at said annual meeting, and transmit it with their annual report to the governor and council.

SECTION 11. The accounts and books of the treasurer shall at all times be open to the inspection of the trustees.

SECTION 12. The state board of charity shall have general supervision of said school and home, and may, when so directed by the governor, assume and exercise the powers of the board of trustees of said school and home in any matter relating to the management thereof.

SECTION 13. For the purpose of meeting expenses incurred under the provisions of this act the treasurer and receiver general is hereby authorized, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding three hundred thousand dollars, for a term not exceeding twenty years. Such scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest at a rate not exceeding four per cent. per annum. They shall be designated on the face thereof as the Massachusetts School and Home for Crippled and Deformed Children Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the commonwealth, and the principal and interest shall be paid at the times specified therein in gold coin of the United States or its equivalent; and such scrip or certificates shall be sold and disposed of at public auction, or in such other mode, and at such time and prices, and in such amounts, as the treasurer shall deem best. Such amounts



shall be raised annually by taxation as will be sufficient, with the interest thereon, to pay the interest on the loan and the principal as it falls due.

SECTION 14. This act shall take effect upon its passage. [*Approved June 8, 1904.*]

ACTS OF 1907, CHAPTER 226.

AN ACT TO CHANGE THE NAME OF THE MASSACHUSETTS SCHOOL AND HOME FOR CRIPPLED AND DEFORMED CHILDREN TO THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. The name of the Massachusetts School and Home for Crippled and Deformed Children, established by chapter four hundred and forty-six of the acts of the year nineteen hundred and four, and located in the town of Canton, is hereby changed to the Massachusetts Hospital School.

SECTION 2. This act shall take effect upon its passage. [*Approved March 20, 1907.*]

ACTS OF 1909, CHAPTER 497.

AN ACT RELATIVE TO THE CARE OF CERTAIN CHILDREN AT THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. Chapter four hundred and forty-six of the acts of the year nineteen hundred and four is hereby amended by striking out section nine and inserting in place thereof the following: — *Section 9.* The trustees may, upon the written application of any child entitled to receive the benefit of said school, or upon such an application made by a parent, guardian, or person having the legal custody of the child, or by any state or municipal board or official having such custody, admit such child to said school, subject to such rules and regulations as the trustees may prescribe, and the trustees may at their discretion discharge such child from the school. The charges for the support of the children of the school who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school. The board of such children as have a legal settlement in some city or town shall be paid by such city or town at a rate not exceeding four dollars a week,

notice of the reception of the children by the trustees being given by them to the overseers of the poor of the city or town of settlement as soon as is practicable; and the tuition and board of those having no such settlement shall be paid by the commonwealth. The trustees may in their discretion receive other children who have no means to pay for tuition and support, and the tuition and board of all such children shall be paid from the treasury of the commonwealth. The attorney-general and district attorneys shall upon request bring action to recover said charges in the name of the treasurer and receiver general. Such charges as are paid by the commonwealth, or by any city or town, shall not be deemed to have been paid as state or pauper aid, and no person shall be deemed to be a pauper in consequence of his inability to pay for the support of a child in said school. The admission of a child as aforesaid to the school shall be deemed a commitment of the child to the care and custody of the commonwealth, and the trustees, with the approval of the state board of charity, may in their discretion detain the child at said school during its school age, or for such longer period during its minority as in the opinion of the trustees will tend to promote the education and welfare of the child.

SECTION 2. This act shall take effect upon its passage. [*Approved June 15, 1909.*]

SEVENTH ANNUAL REPORT

OF

THE TRUSTEES

OF THE

MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),

AT CANTON,

FOR THE

YEAR ENDING NOVEMBER 30, 1914.



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## OF THE

### MASSACHUSETTS HOSPITAL SCHOOL.

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ALFRED S. PINKERTON,	.	.	.	WORCESTER.
WILLIAM F. FITZGERALD,	.	.	.	BROOKLINE.
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ORA G. DANIELS, M.D.,	.	.	.	<i>Assistant Physician.</i>
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# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

In presenting the seventh annual report of the Massachusetts Hospital School, the trustees desire to call attention to the fact that, with the construction of the new cottage dormitory, the plan presented in the act of the Legislature has been accomplished.

This act contemplated provision for the educating, lodgment, nursing and hospital care of not exceeding 300 crippled children.

It has been the duty of the Board of Trustees to provide for a wise and economic expenditure of the money granted (\$300,000) for the establishment of this new institution. It is with satisfaction that notwithstanding the increase in cost of material and labor, and in spite of the fact that without the guidance of established precedents the problem presented by the organization of a State school for cripples was in most respects a new one, the institution, as originally planned, has been erected, furnished and equipped in a most satisfactory manner within the original appropriation.

This was made possible through the careful study of the question of the educational needs of the crippled children of the State and by the construction in the beginning of only a portion of the plan, with additions as the experience of the actual operation of the school justified.

It may be of interest to mention at this time in review not only the results obtained in the training and education of crippled children in the past decade, but some of the problems confronting the Board of Trustees at the outset, and in what way they attempted to overcome them.

As there is no accurate census of cripples in the Commonwealth, it was impossible to determine the number needing institutional aid, or the proportion of cripples whose deformity was congenital, the result of bone disease or of paralysis, or the number of those who could be benefited by surgical treatment; and it was also impossible to ascertain to what extent they could be brought by treatment or training to a state of self-support or partial support.

Provision was made at first for not more than 120 children; and from the observation of these cases, it became clear that with trained self-reliance and energy, there were few cripples of the class admissible to the school who, placed under proper conditions and with an educational foundation of a grammar school grade, could not be brought to a condition in which self-help or self-support could not be reasonably expected after the child had grown to adult age.

Even more important than schooling was the development of a spirit of self-reliance and individual responsibility. Rigid discipline, a routine of school life and institutionalism were especially to be avoided, even at a cost of more difficult administration. The maximum of laxity in discipline, possible without detriment to the scholars, seemed necessary.

Much care was given in the selection of teachers and nurses. Patience, tact and forbearance were especially necessary, as rigid discipline or harsh correction of a cripple must be regarded as an inexcusable fault in an institution devoted to the elevation of an especially weak and defenceless class of humanity. Firmness accompanied with kindness could be the only rule of school government. Any departure from this should be looked upon as a violation of the rules of the institution on the part of an employee.

After some deliberation, it was determined that the age limit should be placed between the fifth and fifteenth years, a period during which the educational needs for children of this class were most important. As the institution was to be primarily a school, a strict adherence to the rule prescribed in the original act was necessary. It seemed advisable to devote its energies to educational training, and this necessitated the exclusion of children of defective intelligence and impaired faculties.

The standard grade was that of a primary school, with additional opportunities for industrial and vocational training. Children, whose mental intelligence is hopelessly feeble, demand special care, and are provided for better elsewhere than at a hospital school. This class, although unfortunately a large one, was left for other State institutions, and the same is true of the deaf and the blind. Children were not admitted for a short stay, and acute cases needing only surgical relief were excluded, as ample facilities are furnished in many hospitals throughout the State for excellent surgical care. Children, doomed to die within a short period, were also excluded as not coming under the educational scope of the institution.

Experience has taught that no matter what improvement may come to the health of future children through better sanitation in the Commonwealth, it is certain that there will be demand for the educational and industrial training of a large number of deserving children, illiterate or improperly taught on account of physical disabilities, a class which could by proper care be made helpful to the community.

The first requisite, after providing food and lodging for these children, slum-stunted and shut-in as many of them have been, was pure air in unlimited quantity day and night. This was brought about not only in out-of-door playgrounds and out-of-door schoolrooms but in dormitories which were as fresh at night as an out-of-door ball field, furnishing shelter and warmth when needed, but with roof ventilation as free as an Indian tepee. On inspection, these sleeping wards at midnight and in the early morning, although filled with forty sleeping children, were found fresher than any ordinary hospital ward furnished with flue ventilation, or the private room of even the best built house relying upon window ventilation. The value of this simple system of ventilation was demonstrated by smudge tests, and as compared with the regulation vent, either plenum or vacuum system, found to be far superior in actual use. The method was found applicable to a two-story building, and, as described in former reports, was used in the construction of the last two cottage dormitories.

To this fresh-air treatment of previously shut-in children may be attributed one noticeable feature in the health of the members

of the school, viz., the unusual absence of colds, coughs or catarrhal affections, which has been observed summer and winter in all the years since the opening of the school, and which cannot be regarded as accidental. In addition to this there has been a diminution and disappearance of enlarged adenoids in those children who were on entrance afflicted with this common respiratory affection. Surgical treatment of tonsils has been unnecessary.

The results in the treatment of tuberculous disease of the hip, knee and spine have been remarkable in the establishment of permanent serviceableness with little or no disability and much less deformity than is usually observed, and can be largely attributed to the pure-air treatment, the activity made possible by careful management, orthopedic treatment, and the resulting improved general condition.

In the paralytic group, unexpected results have followed the association of the crippled children with others equally or more disabled. The loss of self pity, the readiness to make the most of their unimpaired faculties, the disappearance of self-consciousness directly attributable to collecting children in their play, have proved to be most advantageous in the training of those handicapped by paralysis. A boy in a wheel-chair flying his kite alone, a boy without legs or crutches walking in steel frames, stimulates the newcomers fresh from homes in which they have been pitied and spoiled into an unnecessary feebleness. This spirit of self-confidence and self-help has been shown in the activity of a baseball team of cripples, the equal and at times the superior of the competing teams of normal boys.

In the school education of the children, the advantage of the system of concentration has been noticeable, although no child received more than two hours' schooling in the day. This has produced satisfactory results through the zealous efforts of teachers, and by the fact that the hours of instruction could be adjusted suitably because the children were lodged in the institution and their free hours could be given to out-of-door play or to practical courses of sewing, carpentering, farming, etc. That the children have not suffered educationally by this system has been shown by the fact that the number taken from the public school life on account of their affliction and returned to it,



after a few years' stay at the hospital school, has been found not only to be equal to their former comrades in scholarship but in many cases to be more advanced.

The stimulating influence of outdoor sports is of recognized value in the development of individual self-reliance and energy. It had not seemed to the trustees possible that much could be accomplished in a school for crippled children through the means of sports; but it was found not only that a baseball team could be organized but that it could be brought to such a state of excellence as to be often superior to a team made up of normal school boys of similar age.

In the original plan it was intended that the water supply should be the one furnished by the town. On account of fire risks and the cost of water, it seemed safer to provide a special supply for the institution, and application was made to the Legislature for a grant for this purpose. In accordance with authorization by the provisions of chapter 38, Resolves of 1913, and following action referred to in our last annual report, to secure an adequate independent water supply, a well has been drilled into bed rock, as stated in the report of the superintendent to which reference is made. While the supply of this first well is not so voluminous as we hoped for, it will possibly give us an annual supply of approximately 20 gallons a minute, and at a production cost of not more than one quarter of the present rate paid to the town. By continuing our present connection with the public water main, and providing for elevated or pressure storage and high-pressure pump for fire emergencies, we may regard the institution's present water requirements provided for.

After some years' experience it was found advisable to provide a large assembly hall, not only for religious instruction and services but also for lectures and for a library. This need has been fully supplied through a special grant from the Legislature.

It was originally thought that milk could be economically furnished by the adjacent farms, but a serious milk epidemic showed the need of a proper milk supply under the direct control of the institution; and by grants of the Legislature a cow barn has been constructed and a herd of cows purchased.

To the many needs of the institution enumerated by our

superintendent in his report submitted herewith, all of which we recognize and fully appreciate, we would also call attention to the urgent necessity, because of the growth and development of the school, for new and more adequate living quarters for its superintendent, and the assignment of those now occupied by him to the use of his assistants.

The responsibility for the care of ones afflicted as the children of the hospital school are, demands not only careful management and supervision but administrative ability of a high grade, with a suitable corps of trained assistants. Better accommodations for the superintendent and officials will soon be needed to provide for thorough administration of high grade. However, in view of the present uncertainty in financial conditions, and guided by an inclination to advance with caution and conservatism, we have decided not to ask further appropriations this year for the fulfilling of these needs.

The loyal and enthusiastic work of the corps of officers, instructors and attendants merit our commendation.

We wish especially to record an expression of our appreciation of the excellent work of our superintendent, who has met and successfully solved the ever-increasing problems with which he has been confronted, and we recommend a substantial increase in his salary.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
ALFRED S. PINKERTON.  
WILLIAM F. FITZGERALD.  
WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to submit my seventh annual report of the Massachusetts Hospital School, covering the period from Dec. 1, 1913, to Nov. 30, 1914, inclusive. Since the school was established there has been no appreciable diminution in the number of applications for admission, 521 children having been cared for since the first case was received on Jan. 14, 1908.

Among the first admissions there were, as might be expected, many unpromising cases. Some, who were hopelessly bedridden and mentally incompetent, were naturally sent to a State institution either because they were found to be undesirable in other institutions or because parents and certifying physicians desired to give doubtful cases the benefit of any possible opportunity for improvement.

It has therefore been impracticable to estimate the age, sex, character of disability and relative number of children the institution would be called upon to receive, and for whose special education and care it should be organized and developed, but the present members of the school appear to fairly represent those who are likely to be received and to justify a more comprehensive plan for the future. Some are only temporarily crippled, practically all give promise of improvement, and the vast majority are keen mentally, some of them to a marked degree.

Of the 258 remaining at the end of the year, 113 were suffering from tuberculosis of the bones, 61 were crippled from infantile paralysis, and 84 from other forms of paralysis, amputation deformities, rickets and mal-nutrition. Of this number, 97 were dependent upon splints for support in walking, 78 used crutches, 38 wore plaster-of-Paris bandages for protection and support, and 30 were confined to wheel-chairs and beds. Three hundred and eleven patients were under treatment during the

year, 153 boys and 97 girls being enrolled as members at the beginning of the year, and 36 boys and 25 girls were admitted. The average admission age was eight years and ten months, as compared to an average of seven years and eleven months for the preceding year. Of those remaining at the end of the year, 6 were supported as private patients, 151 were paid for by towns and cities, 44 were State minor wards, and 57 having no settlement were rated as State cases.

Fifty-five children, of whom 39 were counted as discharged and 16 as being on trial or on visit at the end of the year, were dismissed during the year. Thirty-five left to enter the public schools with normal children or to become self-supporting. The majority of all who have left the school take a pardonable pride in its welfare and feel a personal responsibility for its success. Those who live near-by have returned many times to visit, to have braces or splints repaired or adjusted, or to report the progress they are making in school or at self-support. Those who have been unable to return have kept in touch with the school by correspondence with remaining friends, by our letters of inquiry, perhaps by their enthusiasm in the baseball team, or their general interest in the progress of the school. Twenty-one children, after an average residence of three years, four months and twenty days, either recovered or were so much improved that they were discharged to enter the public schools. Some had never attended school previous to admission, and nearly all maintained the public school standard while recovery was taking place. One boy, whose case is by no means an exceptional one, was admitted at the age of five years. He was suffering from tuberculosis of the spine, and had never attended school. He attended the outdoor school first on a Bradford bed frame and later in successive plaster-of-Paris jackets. When recovery occurred, he entered the public school in practically the same grade he would have been in had he never left home. It should be borne in mind that such cases cannot remain in a general hospital on account of the long period of convalescence, and that treatment at home is not only unsatisfactory but without educational advantages. Such cases appeal to us from the humanitarian point of view, but the work of the school is also of distinct economic value to the State. The

cost of caring for this boy is insignificant compared with the expense of maintaining an ignorant hunchback through life. Five of those who were dismissed to continue their education with normal children left with the school diploma, 4 have entered high schools, and 1 has entered a commercial college. Fourteen children, after an average residence of four years, six months and ten days, left to seek employment, of whom 2 are self-maintaining at poultry raising and farm work, 2 as operatives in large factories, 1 as a printer, 2 as licensed firemen, 1 as a crossing tender and railroad station employee, 1 as an express messenger, 1 as an inspector of work in an apron factory, 1 at office work in a hotel, 2 at domestic work, and 1, not regularly employed on account of ill health and lack of ambition, is earning occasional sums as a cornetist in an orchestra. Of the remaining dismissals, 9 were mentally deficient, 1 was found to be insane, and 2 were suffering from progressive forms of paralysis; the parents of 1 child objected to having bills sent to the place of settlement; parents were unhappy when 3 of the boys left home; 1 homesick boy was not returned from vacation; and 3 children died.

Our schools have in attendance this year a larger number than ever. Two hundred and twelve pupils are on our class list. The daily attendance may be said to be very good, especially in the upper grades. The children who are physically able to be entered on our rolls usually attend with very few breaks. In this respect our classes compare favorably with those of the public schools.

We have a subprimary department and the full eight grades. Two grades, which are of large size, have each two divisions. Hours for all above the subprimary pupils range from one hour and twenty minutes to two hours of classroom work daily. No outside study is required, though some is done voluntarily.

These hours, their limits set at first on account of a physical condition which forbade longer confinement for the pupil, are now continued because our grades have demonstrated the fact that children in small classes, studying essentials for a short daily period intensively, can, if of reasonable mental equipment, keep up with scholars in our public schools under longer hours. That this is possible has been shown by the fact that



graduates from all our classes are doing high school work. One, from 1912, is now in the third year of a large Boston high school. Not all the pupils in every grade accomplish this. Each class numbers some whose minds are not adapted to such concentrated work; but these are few and could easily be provided for in special ungraded groups did the size of our teaching force permit. Our pupils are, in the main, merely average boys and girls. Many are mature mentally though held back by physical incapacity from any course of study in an ordinary school. Such children sometimes make surprising progress. One fifteen-year-old boy, placed at first in the third grade, is now after a year doing good seventh grade work.

Music and sport receive a good share of interest. The band, though it has lost some of its best members through graduation, is continuing its good work. The mandolin club among the girls has added much to the pleasure of entertainments. The progress shown at the closing concert of their term was very gratifying. The "arts and crafts" classes are now working on basketry and State flags. Pupil exhibitors brought back a number of premium ribbons from a recent fair in town. A pleasant affair of early summer was the exhibit of grade and industrial work by the scholars. The charts were arranged in the library. The mandolin club furnished music, and refreshments were served to many visiting parents and friends.

The holidays have been, as usual, appropriately observed. The graduation exercises this year had for the central idea a summary of school, industrial and academic work. The programs, neat in the class colors of green and white, were the work of one of the graduates, who is now employed in a printing office. Current events furnished the inspiration for a discussion of the Mexican situation. One boy, who had observed the subject at first hand, talked on cotton weaving. One of the girls demonstrated the use of a bread-mixer, displaying some bread which she had made and baked, and then mixing another batch which she assured the audience would be just as good. The final number was from a play read in school, the trial scene from the "Merchant of Venice."

The use of the assembly hall for dramatic work by the pupils has been this year continued to a greater extent than ever. The

class of 1914 gave a four-act drama of the Spanish-American war; the intermediate grades presented a colonial play and drill on the evening before Washington's Birthday; the boys have put on two plays, and they have just performed a light farce in three acts. All this work is undertaken primarily with regard to its educational value and very little with regard for display. The plays are taken up for the good they do to the pupils performing and not in the first instance for the benefit of the public. However, at their worst they offer a fruitful topic for criticism, and at their best much apparent enjoyment to our domestic audience. Crude and even pitiful as may be some dramatic efforts by the school-boy actor, there are few activities possible to our children better fitted to bring out the powers of the individual. To the careful observer, the many participants have shown clearly a gain in self-reliance, sense of responsibility, initiative and team-play. Upon these rather than upon theatrical grounds has dramatic work earned the right to continuance as a part of our educational plan.

Practical industrial training for the older boys and girls has been carried into nearly every department of the institution, in the belief that theoretical vocational instruction in the classroom for crippled children, with the limitations of a grammar school education, is ill-advised. Weaving, basketry, lace making and similar handwork are desirable accomplishments and pleasing diversions, but seldom lead to independent, bread-winning occupations. The average crippled child is so far behind the normal boy or girl that all his energies must be conserved for the most practical things, to fit him for a livelihood at a reasonable age.

I am more and more convinced that the economic independence of crippled children depends even more upon the child's mental attitude towards a life of usefulness than upon the physical handicap. However skillful a cripple may be in any line of work, he can never be lifted out of the dependent class until he becomes weaned from the self-pitying, self-conscious, self-centered feeling which most crippled children have been taught to entertain. The solitary life of the crippled child at home does not afford the opportunity for healthy competition upon a footing of equality which the cripple must have to gain



the self-assurance and the self-reliance to care for himself and manage his own affairs. If their disabilities are magnified by contact with normal persons only, especially during the impressionable developmental age, they are less inclined to become resourceful or to believe that independent action is possible. The usual objections made to institution life, as compared to home care for certain other dependent classes, do not apply with equal force to crippled and deformed children. In fact, the disadvantages might almost be reversed. Wholesome play, without too much supervision, and the companionship of others similarly afflicted encourage co-operation, self-sacrifice and loyalty, which are of the greatest fundamental importance in the development of character. Practically all of the social activities known to boys and girls who are well are enjoyed by the children of the school, and spontaneous expressions of individual interests and ability form the basis upon which the vocational training is largely determined.

In the maintenance of an institution with a population of more than 300, a large number of skilled employees are required. Most kinds of work to be found in every small community are represented, and are sufficiently varied to be adapted to the capabilities of children from all stations of life. Carefully selected employees, trained to regard themselves as teachers of practical things, are proud of the accomplishments of pupils selected for their departments.

Carpenters, painters, engineers, bakers, cobblers, tailors, stenographers, telephone operators, dressmakers, cooks, teamsters, gardeners, housekeepers, laundresses, and many others, can be developed here by an apprenticeship with experienced employees. In some occupations, experimental knowledge gained from observation and actual practice are absolutely essential. Boiler inspectors of the District Police, for instance, will not grant a license to a fireman or engineer upon theoretical knowledge alone. A certain amount of actual experience is required.

Take, for example, the boy who has regular duties to perform under the immediate supervision of the firm but indulgent engineer, who is accountable for the power machines, the heating, lighting, plumbing and mechanical work of the institu-

tion, or the pupil who acts as an understudy to the telephone operator and is finally entrusted with the responsibility of receiving and distributing thousands of calls which pass through our switchboard, they quickly become fired with an ambition to do the work as well as the paid employee. Moreover, they learn to appreciate the importance of efficient work, of the relationship between employer and employee, and the necessity of rendering service equivalent at least to value received. The value of such practical training is obvious and cannot be overestimated.

None of the industrial departments is organized to be dependent upon the assistance of pupils, because it often happens that the same number of children or sometimes even none is found to be physically, educationally or temperamentally qualified for routine work. Their service is upon a purely voluntary basis, and the employee with whom a boy or girl does not ask to be associated is usually looked upon as more or less of a failure.

As a possible aid to the vocational guidance and training of the children admitted, the assistance of parents, legal guardians and attending physicians has been sought. That the problem is a difficult one, and the subject vaguely understood, may be gained from the answers given for the children admitted during the past year in reply to the following: "Can you suggest something in which you believe the child would be likely under suitable training to become proficient?" Forty, or 71 $\frac{3}{4}$  per cent., had nothing to recommend, 8 suggested vocal or instrumental music, others replied as follows: clay modeling and basket work; millinery; bookkeeping; printing and drawing; sewing; the use of tools; anything in which legs do not play a prominent part. The answers appeared to indicate the desire of the parents rather than any special aptitude of the children, as practically none was found to be adapted by talent or inclination for the work recommended.

The interest and enthusiasm of parents in the work of the school may be said to be one of the features of the institution. Their co-operation has been invited and encouraged whenever possible, and has been found to be of the greatest assistance in promoting the welfare and happiness of the children. While

relatives have been requested to call only upon Saturdays and legal holidays, between 9 A.M. and 4 P.M., they have never been deprived of the privilege of visiting their children whenever they have called at other times either day or night. Another cause for the apparent appreciation with which the institution is regarded is doubtless due to the many home visits which have been arranged for the children, amounting to 2,852 days' absence during the year.

Maintenance repairs and improvements during the year have suffered somewhat because regular workmen and mechanics have been of necessity employed on work under special appropriations. However, a large amount of routine repair work has been done, as is shown by the reports of the various departments.

The infirmary has been given two outside coats of paint, and the domestic science cottage one coat. Twelve rooms in the administration building have been refinished in lead and oil to replace the original kalsomine finish. Seventy iron bedsteads have been enameled. The paroid roofing and skylights on all buildings have been refinished. Three hundred and six lights of glass have been set, many floors treated, the entire interior of the east dormitory refinished, and a great amount of miscellaneous work done besides the special work on the new cottage and cow barn.

The engineering department has not only done the work necessary for the heating, lighting and plumbing of the new buildings but has in addition to its regular work made 26 new Bradford abduction hip splints, 49 new caliper splints, 76 new caliper-splint shoe plates, and repaired 295 splints of various kinds.

A review of the work accomplished in the tailor shop, which was opened March 1, is of interest as showing repairs on 1,487 pairs of boys' pants, 242 boys' coats and 40 girls' coats. Also there were made 42 girls' suits, 60 boys' blouses and 15 girls' coats. Two one-legged boys have shown special aptitude for work in the tailoring class.

Aside from the thousands of stockings darned and the hundreds of articles of clothing repaired, the sewing room, in which the usual number of girls have been taught, has turned out new

work as follows: 43 dresses, 5 pairs bloomers, 2 princess slips, 15 dozen nightgowns, 2 dozen aprons, 15½ dozen towels, 8 dozen E. Z. waists, 13 dozen sheets, 36 dozen pillow slips, 5½ dozen draw sheets, 8 dozen pairs drawers, 1 dozen screen covers, 1½ dozen hot-water bottle covers, 4 dozen bed socks, 8 dozen table napkins, 9 dozen children's bibs, 4 dozen blouses, 1½ dozen corset covers, 2 surgeons' gowns, 8 Russian suits, 8 dozen tray covers, 3 dozen bureau covers, 5 clothes bags, 2 dozen stocking extensions.

The cobbler, with his class, has to his credit repairs on 18 artificial legs and 45 moccasins; sewing done on 86 shoes; 170 leather repairs and covers for splints; 1,071 shoe taps and heels; besides making 65 pairs of new moccasins, 26 knee caps, 85 splint straps, 165 high soles and 9 back braces.

The completion of the new cottage for 32 girls has been delayed on account of the necessity of carrying on the work with as little nonresident labor as possible, that it might be erected within the balance of the original building appropriation of 1904. It will be ready for occupancy within a few weeks. The furniture from the Concord Reformatory has already arrived, and there will be no delay in moving in, to relieve the present congestion in the west dormitory, as soon as the floors are laid. Although of the same dimensions as the boys' cottage and having the same interior arrangement, it has the advantage of a large veranda, reached from the front stair landing, between the two stories and extending around the building over the roof of the first story. The building should be described in detail in the report for the year of its completion, to satisfy the demand which is already being made by those interested in a better method of ventilation than has heretofore been introduced. It is gratifying to be able to report in this connection that the people of the town of Canton who have had an opportunity to observe the advantages of the ventilating system which the trustees have adopted have just completed a substantial brick schoolhouse modeled from the infirmary wards.

The cow barn which was begun last year has been completed as far as the appropriation of \$3,000 would permit. The exposed studding at the ends and the rafters should be covered with hard plaster, to improve its interior appearance and to



facilitate more thorough disinfection, but the slight expense of doing the work would hardly justify an additional special appropriation. The building is 90 feet long and 42 feet wide. It is located south of the main barn, with which it is connected at its northerly end by a 30-foot covered passageway. It is a one-story structure and has neither feed loft nor basement. The floor and the walls up to the bottom of the windows, a height of about 4 feet 10 inches above the floor, are entirely of concrete.

The upper portion of the walls is of wood, as is also the roof which is of the monitor type. In preparing the foundation for this building the surface loam was removed down to bed gravel. Excavation was then made to a depth of 4 feet into the gravel for the footing for the walls and fourteen concrete piers. The piers are each 2 feet square at the bottom and taper to a bearing surface 8 inches square at the floor. The walls are 12 inches thick from the bottom up to the floor. Above this, they are 8 inches thick, there being an offset of 4 inches at the bottom of the floor, which itself is 4 inches thick.

Thus it will be understood that the floor rests solidly upon bed gravel, the tops of the piers and the offset in the walls, and has no basement or air space below it. This building has seventy-two windows, those in the monitor being operated by a worm gear, thus placing the direct system of ventilation under the same easy control as that in the wards.

The interior is arranged for forty tie-ups, twenty on each side, facing a central space which is in a direct line with the covered passageway to the main barn. The feed troughs and litter trenches, all of concrete, are plumbed so as to be easily washed, cleaned and disinfected. The overhead track for the litter carrier extends beyond the south end, outside the building, so that the manure can be dumped from the carrier directly into a cart, for removal each day. On each side of the connecting covered walk to the main barn, concrete foundations for silos have been built, and a Green Mountain silo, having a capacity of 75 tons, which is sufficient for our present needs, has been erected on the westerly foundation.

A milk house, having concrete foundations and the same general exterior construction as the barn, is now being built. It

is located a few feet east of the passageway already mentioned, and will be connected with it by a covered walk. Pipes for high-pressure steam, with returns, have already been laid from the boys' cottage to the milk house. They are placed in a 10-inch Akron drain pipe and insulated with sponge and asbestos.

The unsuccessful efforts to find an adequate supply of water above bed rock, either upon the land of the institution or within reasonable distance, led to the drilling of a well into bed rock, as outlined in the report of last year. At the site chosen, 95 feet northeast of the engine house, a well has been drilled to a depth of 404 feet and 9 inches. Bed rock was not found until the unusual depth of 238 feet had been reached, which was most unexpected as it had been struck at near-by points much nearer the surface. Water was found at a depth of about 350 feet, rose to within 39 feet of the surface, and flowed at the rate of slightly more than 20 gallons per minute. Drilling was then continued 50 feet farther, but without increasing the supply. The well is formed by 150 feet of heavy 10-inch wrought-iron casing, and a heavy 8-inch wrought-iron pipe extends from the surface to a point 12 feet into the rock. The space between the pipes is filled with concrete. The first samples of the water sent to the laboratory of the State Board of Health showed decided turbidity with slight sediment, and 10.60 per cent. total residue on evaporation. Examination for free ammonia showed .0002; chlorine, .25; hardness, 4.3; and filtered iron, .065. The last samples, which were taken by the chief engineer of the State Board, were clear and indicated a most desirable quality, but the chemical analysis has not yet been completed. The formation encountered in drilling the well was found to be sand and gravel for a distance of about 40 feet, then a mixture of sand and clay resembling hard pan, with thick layers of both blue and red clay continued to bed rock.

The medical and surgical resources at the command of the institution are noteworthy. The orthopedic surgeons of the board of consultants have made a great many regular visits and promptly responded to every call, often coming at great personal inconvenience and always at their own expense, with-

out thought of pecuniary compensation. Other eminent specialists have generously given advice in special cases. Preparatory to the examination made in all cases by one of the orthopedic staff, all case histories have been prepared by the resident physicians for systematic study and investigation. The X-ray laboratory work has included a greater number of photographs and more scientific information than has been accomplished in previous years. On May 16 a clinic was held for the third-year students of the Harvard Medical School, and at various times throughout the year many physicians from all parts of the country have visited to observe the cases under treatment. The infirmary wards have been filled with the usual number of both surgical and medical cases, but no extraordinary illness or contagious disease has occurred, and the general health of both employees and children has been exceptionally good. In July one boy, who had suffered from hip disease for four years, developed tuberculous meningitis, and died. Near the close of the year two other children died of amyloid degeneration following extensive bone disease of long standing. The death rate, based upon the number under treatment during the year, was .009+ per cent.

The report of the dentist shows 271 appointments, resulting in 317 operations as follows: 35 amalgam fillings; 20 cement fillings; 2 gutta-percha fillings; 57 extractions; 4 examinations; 7 root fillings; 20 treatments; and 172 cleanings.

The improvements made on the farm and grounds, although but a continuation of the work undertaken six years ago, are beginning to show results. A portion of the area under cultivation already has the appearance of soon becoming profitably productive. Finished grades have been established and put into grass for lawns and recreation grounds about most of the buildings. The two avenues leading to the administration building have been given a coating of Ridge Hill gravel, and surfaced with a steam roller by the superintendent of streets at a cost of \$130. Old roads, though still needing much grading, have been improved by filling in with cinders and coal ashes. The most important change in the farm department has been the establishment of a dairy. Fourteen cows, all high-grade Guernseys, were selected by Mr. Ross of your Board,



your superintendent and the head farmer from the farms in northern Vermont upon which they were raised. After being tested in the presence of a member of your Board, they were shipped direct to Canton Junction by special permit from the State Cattle Commission, without the necessity of passing through the regular quarantine station. The maximum price per head was \$100, the minimum, \$65, the average being \$86.42+.

Some confusing difficulties have been encountered in our efforts to comply with recent rulings and requirements pertaining to the valuation of farm labor and products. When the areas under cultivation are not large, the different products many and relatively small, and the time of individual workmen of necessity distributed in different directions, perhaps many times during the same day, the difficulties of making an accurate estimate for each product are apparent. The value of inmate labor has been estimated only when such labor could be properly regarded as saving the labor of a paid employee, and no account has been made of hindrances to productive work of employees who have been required to instruct, since such instruction must be regarded as a highly important part of the treatment, care and education of those for whom the institution was designed and established.

There have been 6,284 pounds of pork produced and dressed, and the following crops harvested: 326 bushels potatoes,  $4\frac{1}{2}$  tons hay (estimated),  $11\frac{1}{2}$  tons straw (estimated), 1 ton rowen (estimated), 15 bushels rhubarb,  $62\frac{3}{4}$  bushels spinach, 9 bushels green peas,  $10\frac{1}{4}$  bushels beet greens, 27 boxes lettuce, 2,503 pounds turnips,  $53\frac{1}{2}$  bushels string beans,  $179\frac{1}{2}$  bushels carrots,  $141\frac{1}{2}$  bushels beets,  $14\frac{1}{2}$  boxes cucumbers (table use), 90 pecks cucumbers (small for pickles),  $6\frac{1}{4}$  barrels summer squash,  $3\frac{127}{400}$  tons winter squash, 4,130 pounds pumpkins,  $128\frac{3}{4}$  bushels sweet corn, 43 bunches radishes, 1 ton cabbage, 3,388 pounds tomatoes, 3 bushels cauliflower, and  $12\frac{3}{8}$  bushels onions.

Maintenance expenses for the year amounted to \$76,679.64, \$5,939.98 being returned to the State Treasurer as an unexpended balance at the close of the year.

Grateful mention should be made of the many friends who

have remembered a large number of individual children by personal visits during the year and substantial holiday gifts.

Religious services have been conducted as in the past years.

The children have shown their appreciation of the good-will of the citizens of the town towards the institution by furnishing music upon several occasions. The band played at the Ponkapoag Grange fair, at a picnic for the Home Garden Association, and at the Wampatuck Country Club field day. The mandolin and guitar club gave a concert at a grange picnic.

The following changes have taken place in the official family: —

Dr. E. V. Keller, who completed his service of two years, entered the orthopedic service of the Massachusetts General Hospital, and Dr. L. S. Kemp of the Tufts College Medical School was appointed to succeed him as junior assistant physician. Mr. S. C. Rogers, who succeeded William H. Coffin as chief engineer, resigned to become chief engineer at Dartmouth College, and Mr. Coffin returned to his former position at an increased salary as a nonresident. Miss Harriet R. Burwell, who so creditably did the work of first clerk during the absence of Miss Mary W. Wentworth, was retained in the clerical service after the latter's return, when the office work had increased to require the services of another assistant. The efficiency of the ward service has been increased under the supervision of Miss Gertrude V. Eastman. For about two years preceding her appointment in February, she was assistant to the superintendent of the Springfield General Hospital, from which institution she was graduated in 1912. Miss Ruth Bartlett, after an acceptable service as teacher in the intermediate grades, resigned at the close of the school year in June, and the vacancy so caused was filled by the appointment in September of Miss Sadie C. Cohen, a Radcliffe graduate, class of 1914.

I feel that I should not close this report without reference to some of the many needs of the institution. The office safe will no longer hold the many books the treasurer is now required to keep, and our voucher books and the recently introduced system of storeroom and farm accounting are for want of a better place left in open desks and upon office tables at

night. Our rapidly accumulating and very valuable medical records and case histories should be stored in fireproof vaults instead of in the present cabinets, which we are obliged to keep in our general office. The demands upon our office force have necessitated the employment of another clerk, who now works at a table in one corner of the general reception room. More office and storage room is needed, and needed badly. We should have a set of heavy scales for weighing farm products.

Our baker has demonstrated the value of his trade as a desirable vocation to teach to more boys than the small room now occupied will accommodate. Our refrigeration space is inadequate for the quantity of perishable food we should purchase in the interest of economy, and the increased number of employees, which the demands of the times impose upon all State institutions, has long since crowded our dining rooms beyond the capacity which was thought to be amply adequate when they were designed less than ten years ago. Reference was made in my report last year to the growing need of a school building. The boys now quartered in the east dormitory could be better classified in two cottages similar to the last one erected, and with very few alterations the dormitory could be utilized for school purposes for a number of years to come. Poultry raising could be profitably developed, both as an educational feature for many of our boys and as a source of food supply, if a few inexpensive poultry houses were provided.

Great care has from the first been exercised in the selection of all employees of the institution, with the result that remarkably few changes have occurred in the service.

To the efficiency of experienced employees, and the harmony and support of your Board is due the marked prosperity of the year.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*

## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations on the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Totals.
Amputation of ankle, . . . . .	2	—	2
Congenital dislocation of hip, . . . . .	—	2	2
Congenital deformity of hands and forearms, . . . . .	1	—	1
Congenital deformity of fingers, . . . . .	—	1	1
Congenital deformity, shortening of leg, . . . . .	—	1	1
Hystero-choreic deformity, . . . . .	1	—	1
Infantile paralysis, . . . . .	9	7	16
Multiple joint disease, . . . . .	1	—	1
Rachitic deformity, . . . . .	—	1	1
Scoliosis, . . . . .	1	—	1
Spastic paralysis, . . . . .	3	1	4
Tuberculous disease of ankle, . . . . .	1	—	1
Tuberculous disease of hip, . . . . .	6	4	10
Tuberculous disease of knee, . . . . .	3	3	6
Tuberculous disease of shoulder, . . . . .	—	1	1
Tuberculous disease of spine, . . . . .	4	3	7
Totals, . . . . .	32	24	56

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	44	14	9
Other New England States, . . . . .	4	5	2
Other States, . . . . .	—	—	3
Total native, . . . . .	48	19	14
Other countries:—			
Azores, . . . . .	—	1	1
Austria, . . . . .	—	3	2
Canada, . . . . .	3	8	10
England, . . . . .	1	3	4
Finland, . . . . .	—	1	1
Germany, . . . . .	—	1	3
Greece, . . . . .	—	1	1
Ireland, . . . . .	—	6	7
Italy, . . . . .	1	6	6
Poland, . . . . .	1	1	1
Russia, . . . . .	1	3	2
Scotland, . . . . .	—	—	1
Sweden, . . . . .	—	1	1
Switzerland, . . . . .	—	1	—
Total foreign, . . . . .	7	36	49
Unknown, . . . . .	1	1	2
Totals, . . . . .	56	56	56

## VALUATION.

Nov. 30, 1914.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building, two dormitories and power house, . . . . .	147,184 08
Equipment for heat, light and power, . . . . .	6,883 47
Infirmery, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,802 11
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	9,248 38
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn, . . . . .	2,996 65
Three isolation houses, . . . . .	751 00
Goat house and henhouse, . . . . .	280 00
Four portable hog cots, . . . . .	200 00
Shop, . . . . .	150 00
Granolithic walks, . . . . .	2,370 06
Water pipes, test well, . . . . .	673 88
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	136 86
Milk house, . . . . .	412 01

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Total, . . . . . \$282,039 60

## PERSONAL PROPERTY.

Food, . . . . .	\$2,814 17
Clothing, . . . . .	2,204 99
Furnishings, . . . . .	25,123 58
Heat, light and power, . . . . .	3,597 43
Repairs and improvements, . . . . .	3,666 40
Farm, stable and grounds, . . . . .	8,738 47
Miscellaneous, . . . . .	6,334 86

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Total, . . . . . \$52,479 90



TREASURER'S REPORT.

To the Trustees of the Massachusetts Hospital School.

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1914: —

CASH ACCOUNT.	
Balance Dec. 1, 1913,	\$1,726 42
<i>Receipts.</i>	
<i>Institution Receipts.</i>	
Board of inmates: —	
Private,	\$1,168 27
Cities and towns,	28,554 98
Reimbursements, charitable	
(State minor wards)	10,134 57
	<hr/>
	\$39,857 82
Sales: —	
Clothing and materials,	\$44 69
Repairs and improvements,	38 90
Farm, stable and grounds: —	
Goats,	\$14 40
Cows and calves,	8 00
Pigs and hogs,	20 70
	<hr/>
	43 10
	<hr/>
	126 69
Miscellaneous receipts: —	
Interest on bank balances,	\$36 95
Sundries,	359 03
	<hr/>
	395 98
	<hr/>
	40,380 49
<i>Receipts from Treasury of Commonwealth.</i>	
Maintenance appropriations: —	
Balance of 1913,	\$1,747 26
Advance money (amount on hand November 30),	4,300 00
Approved schedules of 1914,	71,900 55
	<hr/>
	77,947 81
Special appropriations,	
Less returned,	\$9,963 33
	20 00
	<hr/>
	9,943 33
	<hr/>
Total,	\$129,998 05



*Payments.*

To treasury of Commonwealth, institution receipts, . . . . .			\$40,380 49
Maintenance appropriations: —			
Balance November schedule, 1913, . . . . .	\$3,851	81	
Eleven months' schedules, 1914, . . . . .	71,900	55	
November advances, . . . . .	2,337	91	
			<hr/>
			78,090 27
Special appropriations: —			
Approved schedules, . . . . .	\$9,943	33	
Less advances, last year's re- port, . . . . .		378 13	
			<hr/>
			\$9,565 20
November advances, . . . . .		185 53	
			<hr/>
			9,750 73
Balance, Nov. 30, 1914: —			
In bank, . . . . .	\$1,271	27	
In office, . . . . .		505 29	
			<hr/>
			1,776 56
			<hr/>
Total, . . . . .			\$129,998 05

## MAINTENANCE.

Appropriation (\$82,539; brought from 1913, \$80.62), . . . . .			\$82,619 62
Expenses (as analyzed below), . . . . .			76,679 64
			<hr/>
Balance reverting to treasury of Commonwealth, . . . . .			\$5,939 98

*Analysis of Expenses.*

Salaries, wages and labor: —			
John E. Fish, superintendent, . . . . .	\$2,750	00	
General administration, . . . . .	12,292	10	
Medical service (\$10 not on pay roll), . . . . .	1,591	59	
Ward service (male), . . . . .	2,808	84	
Ward service (female), . . . . .	8,912	59	
Repairs and improvements (\$5.63 not on pay roll), . . . . .	2,092	26	
Farm, stable and grounds, . . . . .	1,876	69	
			<hr/>
			\$32,324 07
Food: —			
Butter, . . . . .	\$1,564	00	
Beans, . . . . .	272	77	
Bread and crackers, . . . . .	104	21	
Cereals, rice, meal, etc., . . . . .	227	23	
Cheese, . . . . .	64	03	
Eggs, . . . . .	1,374	38	
Flour, . . . . .	1,015	33	
Fish, . . . . .	726	40	
Fruit (dried and fresh), . . . . .	1,062	02	
Lard, . . . . .	54	39	
			<hr/>
Amounts carried forward, . . . . .	\$6,464	76	\$32,324 07

<i>Amounts brought forward,</i>	.	.	.	.	\$6,464 76	\$32,324 07
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Food — *Con.*

Meats, . . . . .	5,023 01	
Milk, . . . . .	3,133 11	
Molasses and syrup, . . . . .	36 12	
Spices, seasonings, salt, etc., . . . . .	368 87	
Sugar, . . . . .	908 03	
Tea, coffee, broma and cocoa, . . . . .	393 54	
Vegetables, . . . . .	1,205 08	
Yeast, . . . . .	69 78	
Sundries, . . . . .	103 70	
	<hr/>	17,706 00

## Clothing and materials: —

Boots, shoes and rubbers, . . . . .	\$489 55	
Clothing, . . . . .	1,046 53	
Dry goods for clothing and small wares, . . . . .	426 87	
Furnishing goods, . . . . .	231 34	
Hats and caps, . . . . .	6 93	
Leather and shoe findings, . . . . .	296 09	
Sundries, . . . . .	3 92	
	<hr/>	2,501 23

## Furnishings: —

Beds, bedding, table linen, etc., . . . . .	\$613 54	
Brushes, brooms, . . . . .	182 81	
Carpets, rugs, etc., . . . . .	116 84	
Crockery, glassware, cutlery, etc., . . . . .	255 09	
Furniture and upholstery, . . . . .	90 40	
Kitchen furnishings, . . . . .	331 70	
Wooden ware, buckets, pails, etc., . . . . .	1 98	
Sundries, . . . . .	102 48	
	<hr/>	1,694 84

## Heat, light and power: —

Coal, . . . . .	\$8,239 04	
Freight on coal, . . . . .	126 05	
Gas, . . . . .	61 97	
Oil, . . . . .	80 14	
Sundries, . . . . .	20 68	
	<hr/>	8,527 88

## Repairs and improvements: —

Brick, . . . . .	\$3 96	
Cement, lime and plaster, . . . . .	75 33	
Doors, sashes, etc., . . . . .	22 78	
Electrical work and supplies, . . . . .	155 36	
Hardware, . . . . .	366 36	
Lumber, . . . . .	415 13	
Machines (detached), . . . . .	173 92	
Paints, oil, glass, etc., . . . . .	507 02	
Plumbing, steam fitting and supplies, . . . . .	507 77	
Roofing and materials, . . . . .	40 80	
Sundries, . . . . .	19 86	
	<hr/>	2,288 29

<i>Amount carried forward,</i>	.	.	.	.	.	\$65,042 31
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Amount brought forward,	\$65,042 31
Farm, stable and grounds:—	
Blacksmith and supplies,	\$92 10
Carriages, wagons, etc., and repairs,	137 20
Fertilizers, vines, seeds, etc.,	866 82
Hay, grain, etc.,	1,482 54
Harnesses and repairs,	48 28
Other live stock,	213 05
Tools, farm machines, etc.,	346 05
Sundries,	315 74
Automobile supplies,	501 58
Gasoline for motor,	4 90
	<hr/>
	4,008 26
Religious services,	1,170 00
Miscellaneous:—	
Books, periodicals, etc.,	\$95 05
Entertainments,	218 42
Freight, expressage and transportation,	685 16
Gratuities,	36 87
Hose, etc.,	32 28
Ice,	353 39
Medicines and hospital supplies,	1,718 69
Manual training supplies,	4 25
Postage,	191 96
Printing and printing supplies,	89 03
Printing annual report,	66 47
Soap and laundry supplies,	811 07
Stationery and office supplies,	183 52
School books and school supplies,	242 96
Travel and expenses (officials),	135 06
Telephone and telegraph,	369 86
Water,	1,101 13
Sundries,	123 90
	<hr/>
	6,459 07
Total expenses for maintenance,	<hr/>
	\$76,679 64

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$1,776 56	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$2,337 91	
Account of special appropriations, . . . . .	185 53	
	<hr/>	2,523 44
Due from treasury of Commonwealth account of November, 1914, schedule, . . . . .	479 09	
	<hr/>	\$4,779 09

*Liabilities.*

Schedule of November bills, . . . . .	\$4,779 09
---------------------------------------	------------

## PER CAPITA.

During the year the average number of inmates has been 249.93.

Total cost of maintenance, \$76,679.64.

Equal to a weekly per capita cost of \$5.90.

Receipt from sales, \$126.69.

Equal to a weekly per capita of \$0.0097.

All other institution receipts, \$40,253.80.

Equal to a weekly per capita of \$3.097.

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Prisons and Hospitals loan fund,	. . . . .	\$300,000 00	\$6,770 08	\$297,245 31	\$2,754 69
Assembly hall,	{	20,000 00	} 361 78	29,802 11	197 89
	Res. 1911, chap. 148	10,000 00			
	Res. 1912, chap. 63				
Water supply, . . . . .	Res. 1913, chap. 38	7,000 00	274 00	284 00	6,716 00
Cow barn, . . . . .	Res. 1913, chap. 38	3,000 00	626 37	2,996 65	3 35
Cows and dairy equipment,	Res. 1914, chap. 76	2,700 00	1,911 10	1,911 10	788 90
		\$342,700 00	\$9,943 33	\$332,239 17	\$10,460 83

Respectfully submitted,

JOHN E. FISH,  
Treasurer.

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

WARREN A. MERRILL,  
Assistant Supervisor of Accounts.

## LAWS RELATING TO THE MASSACHUSETTS HOSPITAL SCHOOL.

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ACTS OF 1904, CHAPTER 446.

AN ACT TO ESTABLISH THE MASSACHUSETTS SCHOOL AND HOME  
FOR CRIPPLED AND DEFORMED CHILDREN.

*Be it enacted, etc., as follows:*

SECTION 1. The governor, with the advice and consent of the council, shall appoint five persons who shall constitute the Board of Trustees of the Massachusetts School and Home for Crippled and Deformed Children, the purpose of which shall be the education and care of the crippled and deformed children of the commonwealth. The trustees shall hold office for terms of one, two, three, four and five years, respectively, beginning with the first Monday of December in the present year, and until their respective successors are appointed and qualified; and previous to the first Monday in December in each year thereafter the governor shall in like manner appoint one such trustee to hold office for the term of five years, beginning with the first Monday in December of the year of his appointment, and until his successor is appointed and qualified. Any such trustee may be removed by the governor, with the advice and consent of the council. Any vacancy occurring in said board shall be filled in like manner for the unexpired term.

SECTION 2. The lands held by said trustees in trust for the commonwealth for the use of said school and home, as hereinafter provided, shall not be taken for a street, highway or railroad without leave of the general court specially obtained.

SECTION 3. The trustees shall be a corporation for the same purposes for which the trustees of each of the state insane hospitals are made a corporation by section twenty-three of chapter eighty-seven of the Revised Laws, with all the powers necessary to carry said purposes into effect.

SECTION 4. The trustees shall select a site for the school and home; and shall have power to purchase land therefor, subject to

the approval of the governor and council, and to erect on such land suitable buildings to hold not less than three hundred children and the officers, employees and attendants, and to provide for the equipment and furnishing of said buildings: *provided, however*, that the expenditure for carrying out the purposes of this act shall not exceed three hundred thousand dollars. No expenditure shall be made for the erection of buildings except for plans therefor, until the plans have been approved by the governor and council, and no such approval shall be given unless the governor and council shall be satisfied that the cost of the real estate and the erection and completion of buildings and the equipment and furnishing of the same, so as to be ready for occupancy, will not exceed three hundred thousand dollars. The trustees shall have authority to make all contracts and employ all agents necessary to carry into effect the provisions of this act.

SECTION 5. The trustees shall have the same powers and shall be required to perform the same duties in the management and control of the said school and home, as are vested in, and required of, the trustees of the various state insane hospitals under chapter eighty-seven of the Revised Laws, so far as said chapter is applicable.

SECTION 6. When the buildings constructed under the provisions of this act are so far completed that in the opinion of the trustees they may properly be used for the purposes of the school and home, the trustees shall notify the governor, who shall thereupon issue his proclamation establishing the school and home.

SECTION 7. After the establishment of the school and home the trustees shall receive no compensation for their services, but they shall be reimbursed from the treasury of the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 8. The trustees may appoint, and, subject to the approval of the governor and council, may fix the salaries of all persons necessary for the proper administration of the affairs of the school and home, and may incur all expenses necessary for the maintenance of the school and home.

SECTION 9. The charges for the support of the children of the school and home who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school and home. The



board of such children as have a legal settlement in some city or town shall be paid by such city or town if such children are received at the school and home on the request of the overseers of the poor of such city or town. The trustees may in their discretion receive other children who have no means to pay for tuition and board; and the tuition and board of all such children shall be paid from the treasury of the commonwealth.

SECTION 10. There shall be a thorough visitation of the school and home by two of the trustees thereof monthly, and by a majority of them quarterly, and by the whole board semi-annually, and after each visitation a written report of the state of the institution shall be drawn up, which shall be presented at the annual meeting to be held in December. At the annual meeting the trustees shall make a detailed report of their doings to the governor and council, and shall audit the report of the treasurer, which shall be presented at said annual meeting, and transmit it with their annual report to the governor and council.

SECTION 11. The accounts and books of the treasurer shall at all times be open to the inspection of the trustees.

SECTION 12. The state board of charity shall have general supervision of said school and home, and may, when so directed by the governor, assume and exercise the powers of the board of trustees of said school and home in any matter relating to the management thereof.

SECTION 13. For the purpose of meeting expenses incurred under the provisions of this act the treasurer and receiver general is hereby authorized, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding three hundred thousand dollars, for a term not exceeding twenty years. Such scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest at a rate not exceeding four per cent. per annum. They shall be designated on the face thereof as the Massachusetts School and Home for Crippled and Deformed Children Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the commonwealth, and the principal and interest shall be paid at the times specified therein in gold coin of the United States or its equivalent; and such scrip or certificates shall be sold and disposed of at public auction, or in such other mode, and at such time and prices, and in such amounts, as the treasurer shall deem best. Such amounts

shall be raised annually by taxation as will be sufficient, with the interest thereon, to pay the interest on the loan and the principal as it falls due.

SECTION 14. This act shall take effect upon its passage. [*Approved June 8, 1904.*]

ACTS OF 1907, CHAPTER 226.

AN ACT TO CHANGE THE NAME OF THE MASSACHUSETTS SCHOOL  
AND HOME FOR CRIPPLED AND DEFORMED CHILDREN TO THE  
MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. The name of the Massachusetts School and Home for Crippled and Deformed Children, established by chapter four hundred and forty-six of the acts of the year nineteen hundred and four, and located in the town of Canton, is hereby changed to the Massachusetts Hospital School.

SECTION 2. This act shall take effect upon its passage. [*Approved March 20, 1907.*]

ACTS OF 1909, CHAPTER 497.

AN ACT RELATIVE TO THE CARE OF CERTAIN CHILDREN AT THE  
MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. Chapter four hundred and forty-six of the acts of the year nineteen hundred and four is hereby amended by striking out section nine and inserting in place thereof the following:—*Section 9.* The trustees may, upon the written application of any child entitled to receive the benefit of said school, or upon such an application made by a parent, guardian, or person having the legal custody of the child, or by any state or municipal board or official having such custody, admit such child to said school, subject to such rules and regulations as the trustees may prescribe, and the trustees may at their discretion discharge such child from the school. The charges for the support of the children of the school who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school. The board of such children as have a legal settlement in some city or town shall be paid by such city or town at a rate not exceeding four dollars a week, notice of the reception of the children by the trustees being given

by them to the overseers of the poor of the city or town of settlement as soon as is practicable; and the tuition and board of those having no such settlement shall be paid by the commonwealth. The trustees may in their discretion receive other children who have no means to pay for tuition and support, and the tuition and board of all such children shall be paid from the treasury of the commonwealth. The attorney-general and district attorneys shall upon request bring action to recover said charges in the name of the treasurer and receiver general. Such charges as are paid by the commonwealth, or by any city or town, shall not be deemed to have been paid as state or pauper aid, and no person shall be deemed to be a pauper in consequence of his inability to pay for the support of a child in said school. The admission of a child as aforesaid to the school shall be deemed a commitment of the child to the care and custody of the commonwealth, and the trustees, with the approval of the state board of charity, may in their discretion detain the child at said school during its school age, or for such longer period during its minority as in the opinion of the trustees will tend to promote the education and welfare of the child.

SECTION 2. This act shall take effect upon its passage. [*Approved June 15, 1909.*]

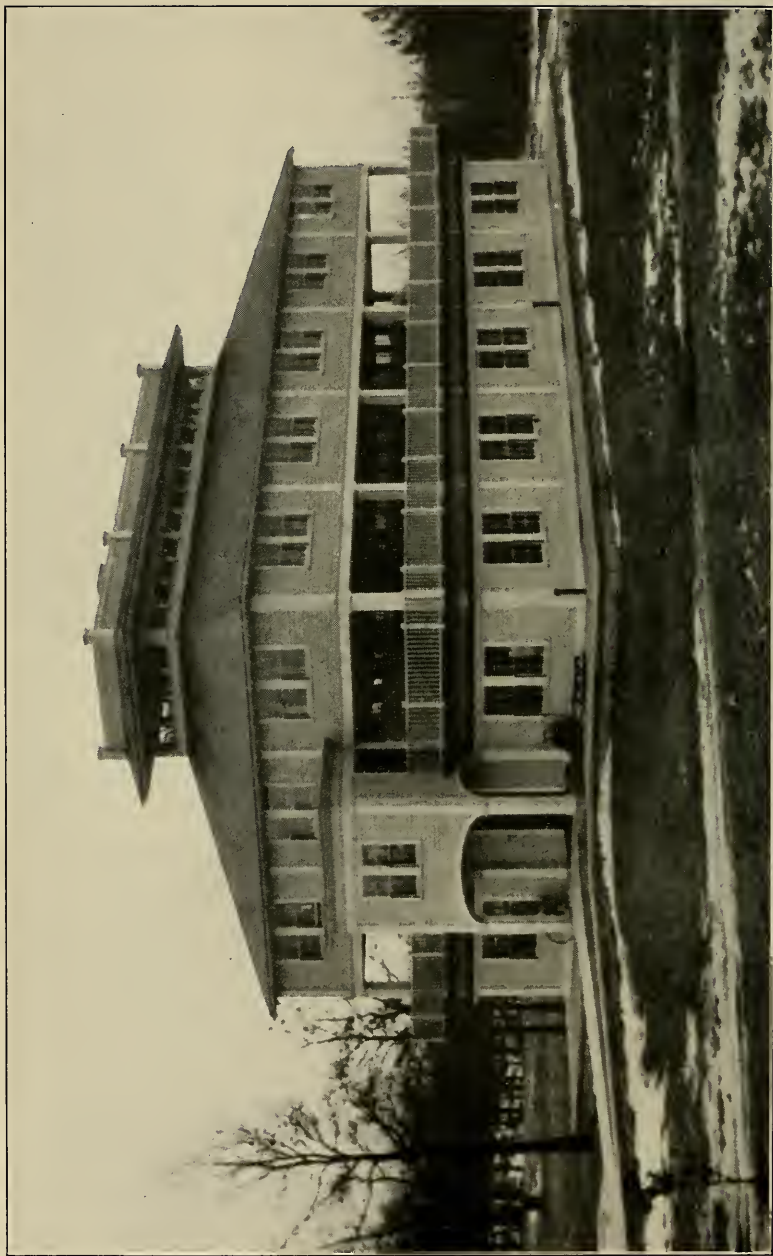












Two-story monitor roof cottage.

EIGHTH ANNUAL REPORT  
OF  
THE TRUSTEES  
OF THE  
MASSACHUSETTS HOSPITAL SCHOOL  
(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),  
AT CANTON,  
FOR THE  
YEAR ENDING NOVEMBER 30, 1915.



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THE STATE BOARD OF PUBLICATION.

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# OFFICERS

## OF THE

### MASSACHUSETTS HOSPITAL SCHOOL.

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#### TRUSTEES.

EDWARD H. BRADFORD, M.D.,	<i>Chairman,</i>	.	.	.	BOSTON.
LEONARD W. ROSS,	<i>Secretary,</i>	.	.	.	BOSTON.
ALFRED S. PINKERTON,		.	.	.	WORCESTER.
WILLIAM F. FITZGERALD,		.	.	.	BROOKLINE.
WALTER C. BAYLIES,		.	.	.	TAUNTON.

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#### RESIDENT OFFICERS.

JOHN E. FISH, M.D.,	.	.	.	.	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.,	.	.	.	.	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.,	.	.	.	.	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	.	.	.	.	<i>Clerk.</i>
GERTRUDE V. EASTMAN,	.	.	.	.	<i>Nurse.</i>
RUTH PARK,	.	.	.	.	<i>Head Teacher.</i>
LILLIAN S. SWIMM,	.	.	.	.	<i>Housekeeper.</i>
WILLIAM H. COFFIN,	.	.	.	.	<i>Engineer.</i>
JESS BLACK,	.	.	.	.	<i>Farmer.</i>

---

#### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
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JOHN LOVETT MORSE, M.D.,	.	<i>Physician, Department of Diseases of Children.</i>
JAMES S. STONE, M.D.,	.	<i>Surgeon, Department of General Surgery.</i>



# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

The trustees of the Massachusetts Hospital School have the honor to present herewith their eighth annual report as required by the provisions of chapter 446 of the Acts of 1904, a perusal of which will show an uninterrupted progress in all departments of the institution.

Although the primary object of the Hospital School is the education of children who through physical disability are unable to attend the public schools, necessary treatment and nursing of cases with affections causing disabilities and deformities is an essential part of the work of the physicians in charge of the school, whose duty it is to provide that the afflicted children shall be placed under the best conditions continuously. The final results of such care and treatment are of interest to the public and also to the medical profession for guidance in the management of similar cases elsewhere.

An examination as to what especially favorable conditions exist at the institution, giving to the patients an improved general health, which is so important in promoting a cure, leads to the conclusion that the provision for the abundance of fresh air furnished to all the children night and day in the school-rooms, dormitories and infirmary is the most important beneficial factor.

The Indian in his tepee in cold weather, arranging a vent at the top of the sloping tent, furnishes an example of habitation with constant renewal of the air contents. He lived practically in a chimney. In the Revolutionary war, when a number of Washington's soldiers in New Jersey were dying of so-called typhus, an enterprising army surgeon reduced the mor-

tality by placing the sick in bunks in loggers' huts around an open fire, with a hole in the top of the pitched roof.

When the hospital superintendent can, he places his patients in a tent, to give the maximum of air compatible with protection from rain. The steam-heated greenhouse has an ample opening at the top, allowing a constant renewal of the air. Pure fresh air is as necessary in a hospital ward as it is in a greenhouse.

How fresh air is provided at the Hospital School is demonstrated to any one visiting the institution or carefully studying the buildings, the ventilating plan differing essentially from that common in public buildings, schoolrooms and hospital wards.

For all children, but especially for those suffering from tuberculosis or other wasting affections, it is of the greatest importance that they should have the tonic of fresh air not only a part of the time but all the time, and that this should be given in such a way as to avoid the depressing influence of cold.

The benefit of this fresh air is observed at the Hospital School in all the pupils, tuberculous or nontuberculous. Comparative absence of common colds, tonsillitis and adenoids is a feature of marked importance in the health of the pupils not to be observed among three hundred children of similar infirm physical condition. The constant absence of the common respiratory disorders during the several years that the school has been in operation is sufficient proof of the fact that the immunity furnished is real and not apparent, conjectured from the accident of statistics of a single year's observation.

The disease known as hip disease is so general and so formidable that it is desirable that the community at large, and especially the medical profession, be informed of the valuable knowledge of the disease which has been obtained from the observation of cases of this affection at the school. The institution offers special opportunities for the study of the course of this disease, under treatment superior to that afforded by hospitals generally, for the reason that cases remain for a long period under favorable conditions and are not seen at intervals under surroundings varying in healthfulness. As the disease is one which demands a long time, months and even years, to

establish a cure, continuity of treatment and of observation is of great importance.

The term hip disease is applied to a chronic affection attacking the bones of the hip joint, characterized by an extensive inflammatory disease which, if unchecked, causes a destruction of the shapes of the bones and a permanent crippling deformity. The course of the disease is accompanied at times with severe pain, and may be and frequently is complicated by the development of an abscess or abscesses around the hip, and in the most severe cases by death due to an infection of other organs and other tissues and by resulting exhaustion.

Unaided, nature sometimes cures, after a long period of disability, by separating the diseased bones through a dislocation of the joint through the action of constant spasm of the muscles about the hip, and by protecting the limb, as far as possible, from jars and the weight pressure of locomotion by a characteristic position of the limb, which is drawn up and held so by unconscious muscular action. The result of the nature cure in hip disease is always a shortened, weakened and deformed limb.

The object of surgical treatment is to protect the limb from jars and bruises during the destructive period, to prevent dislocation, and to reinforce the natural tendency of repair by giving the patient every possible help through favorable conditions, such as fresh air, nutritious food and healthy surroundings.

In a large majority of cases the cause of the disease is the invasion of the germs of tuberculosis into the growing bone tissue of the hip joint, which has become weakened and less resistant from any cause. In some cases in all probability other disease germs or different strains of the tubercle bacillus varying in virulence may cause the disease. But whether this is the case or whether variation in the type of the disease is due to variation in the patients' resistance are questions for future study. The fact is, however, that cases which are brought to the Massachusetts Hospital School are all well-recognized types of the crippling and deforming disease of the hip joint which demands careful care and treatment.

As a rule the cases seen at the school are of the most severe type, which have been treated at first at various hospitals or neglected at home, and sent to the school only as a last resort.

They represent the most unfavorable cases as a class, many having faulty inheritance and also being enfeebled by unsanitary environment.

That even the worst cases of hip disease are benefited by the conditions of care and environment at the school would appear to be true from the record of increasing weight seen in all cases, even in those bedridden hospital patients with general infection, amyloid kidney and liver, which finally proved fatal.

It is not only by furnishing them food and fresh air that patients suffering from hip disease can best be aided to a recovery of health. Muscular activity is normal in a child and is beneficial in stimulating the circulation and in promoting the proper tissue changes necessary to health. Children with hip disease, kept recumbent or confined longer than is necessary for the protection of the inflamed bone tissue, are handicapped in their recovery. It is therefore the duty of physicians in charge of such cases to furnish all possible measures to permit activity compatible with safety to the joint.

Plaster of Paris checks action and prevents locomotion because it is heavy and cumbersome if applied in an attempt to fix the joint, and if the plaster splint is so short as to make activity possible, it is found to be inefficient. Plaster of Paris or other spica treatment also causes atrophy of tissues, bone softening and does not favor rapid bone healing. It should not be used except as a temporary expedient.

It is manifestly necessary in treating cases of hip disease to promote cure by favoring healing of the inflamed and softened bone, it being known that bone, as any other tissue, tends to heal if placed under the best conditions. These conditions consist, not only in improvement of the patient's general condition, but also in protecting the bone, not alone from the occasional twists and jars incident to activity, but from the crowding of the disease-weakened femoral head with the unyielding hip socket, which invariably occurs in all untreated or partially healed cases and leads to deformity, a prolongation of the disease and a resulting crippled limb.

The methods of treatment of hip cases at the school are simple and follow the teaching found in the surgical literature of the subject. These methods vary according to the stage of the disease, for it must be borne in mind that in this affection,



as in others, there is a natural sequence of symptoms and conditions tending either to recovery with more or less joint destruction or to death by exhaustion.

By appropriate treatment the following results have been obtained:—

1. In the most favorable cases, when treatment is begun early and is thoroughly carried out under favorable conditions, complete and permanent cure without deformity and without limb disability.

2. An arrest of the destructible process and a cure, with correction of the deformity and no greater disability than that furnished by such shortening and impaired function as is due to the bone changes which developed before treatment was undertaken.

The school curriculum for the grades has been arranged to conform as closely as possible to that followed in the public schools, so that the children with hip disease and others in the tuberculous group, who may be generally regarded as temporarily crippled only, may eventually take up the regular school work when they return to their homes. In several instances pupils of this type have been prepared for high schools during the time they have been under treatment. Vocational training is being developed more particularly for those permanently disabled, of whom the school already has a number of self-supporting graduates.

Under authority of the provisions of chapter 38 of the Resolves of 1913, providing for the installation of an independent water supply, we have to report the completion of the plant. The well from which the source is derived supplies a quantity in excess of our present needs, and, with the extension of water mains about eight hundred feet and the installation of four fire hydrants near buildings beyond the reach of our present outside hydrants, will not only supply the requirements of the institution for water at a fraction of the cost of the previously purchased supply, but will give ample pressure for fire protection, a condition absent while relying upon our supply from the town water main, owing to low pressure. An auxiliary connection is, however, maintained with the town supply for possible emergencies. This work has been done within the amount of the appropriation, and an unexpended balance of about \$260



will be returned to the treasury of the Commonwealth. We recommend the appropriation of \$900 for extension of 6-inch water main, hydrants and fire equipment.

Owing to the addition of much clerical work, and the fireproof storage of records, which were not required by law when our administration building was erected, our office space is not only greatly crowded but we are compelled to have much of this work done in the public reception room. Another necessity is found in the inadequate capacity of our present bakery and the employees' dining room. Experience shows us that baking is a desirable trade for some of our handicapped boys, who cannot be properly trained for future self-support as bakers without proper facilities for instruction. These matters have received the serious consideration of your Board of Trustees, and studies have been made of existing conditions, and we believe that the best method of accomplishing the necessary results will be served by extensions of the present administration building in the form of two wings, one each on the east and west ends; and we are therefore asking a special appropriation for this purpose of \$26,000, which will also include certain alterations within the present building to conform to the changed conditions.

We deem the construction of additional granolithic walks advisable between the several buildings of the institution, which have to be traversed by our crippled and nearly helpless inmates, thus providing an even surface to the walks, the cost of which we estimate at \$1,000.

Experience shows the necessity for the purchase of an auto truck for the hauling of coal and other supplies to the institution, and the construction of a suitable building in which to keep automobiles, as the present equipment occupies space which is not only not suited for the purpose, but is also needed for other uses. The cost of these items is estimated at \$5,000.

The cost of the annual supply of ice now purchased and delivered as required is so great that we deem it wise to construct an ice house at the institution which will contain a year's supply, put in by our own employees from the adjacent pond, — this at an estimated cost of \$1,500.

For several years a considerable quantity of pork has been raised at the institution with profit. Thus far only portable houses have been used for the purpose; while satisfactory after

the young have become large and strong enough to adapt themselves to the outdoor conditions, we have no suitable breeding houses or conveniences for preparation of food and slaughtering. We therefore deem it necessary to construct a combination piggery and slaughtering house at a cost of \$2,000.

There are a number of our crippled boys who are particularly adapted to poultry raising. A colony of well-stocked poultry houses would serve the double purpose of providing food for the institution and instruction for the pupils. We estimate that such a group of buildings can be erected and equipped for \$1,000.

We have no facilities for the weighing of farm products and supplies purchased in large quantities, and weights of these commodities cannot at present be verified. We recommend the installation of a set of heavy platform scales for this purpose at a cost of \$750.

The trustees have felt for some years that the school was rapidly outgrowing the present limited acreage and urge the necessity for the purchase of additional land, and therefore ask an appropriation of \$10,000 for that purpose.

The trustees desire to express their appreciation of the courtesy extended by the Metropolitan Park Commission in granting the use of the land under their jurisdiction known as the Polo Field in Ponkapoag, which has served the needs of the institution in the production of crops during the year, and it is to be expected that its value will increase for this purpose from year to year.

We realize that the credit for the success in the various departments of the institution is due to the honest, enthusiastic and interested efforts of the corps of officers, instructors, nurses and other employees, and we are pleased to give expression of our appreciation.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
ALFRED S. PINKERTON.  
WILLIAM F. FITZGERALD.  
WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

---

*To the Trustees of the Massachusetts Hospital School.*

I have the honor to submit herewith my eighth annual report as superintendent of the Massachusetts Hospital School for the year ending Nov. 30, 1915.

Three hundred and fifteen children have been cared for during the year, — 189 boys and 126 girls. The highest number at any one time was 279, the lowest 193, and the daily average number 262.18.

There were 258 children at the beginning of the year December 1, but the number quickly dropped to the minimum at Christmas time, when all who were able were given an opportunity to spend the holiday vacation in their homes. Home visits have been arranged and family ties strengthened whenever practicable, especially for those who should remain in the school for a number of years. Two hundred and fifty-nine such visits have been made, the total number of days' absences amounting to 2,540.

A general review of the disabilities represented by the 270 children under treatment at the close of the year will give an idea of the amount of daily routine attention required in adjusting braces and splints, in bathing, dressing, feeding and in many other respects administering to the needs of a large group of disabled boys and girls.

Eighty-one were using crutches, of whom 49 were wearing traction abduction splints for hip joint affections; 15 were confined to wheel beds or chairs; 31 had plaster jackets or braces for weak or diseased spines; 23 wore caliper splints upon both legs, while 25 had one caliper splint each; 9 were wearing Thomas knee splints, and there were 17 infirm patients, of whom 10 were upon bed frames.

While it is the general policy of your Board not to admit those who are neither mentally nor physically qualified to profit by the special care and training the school is organized

to give, it seems probable that a certain number of hopeless cases will continue to be received until some arrangement for the examination of all applicants can be made by some one connected with the institution.

In July an application was received for the admission of a six-year-old boy who was certified as being mentally bright and having a congenital deformity of the feet. Upon admission he was found to have spastic paralysis, affecting not only his feet, legs and arms but also his mind to such an extent that it is very doubtful if he can ever be taught to walk or advanced beyond the most elementary grades in school. His devoted parents realize that they cannot give him even necessary care at home, but they do not regard him as mentally deficient and object to his removal to a school for the feeble-minded. The place of settlement is willing to pay for his support, and influential friends consider him merely as a crippled and deformed boy who should remain where he is.

Another case of spastic paralysis, a boy of twelve, shows some mental impairment which others have thought to be due to environment and lack of opportunity. He is found to have mild epileptoid convulsions which have not been observed by those whose attention has been called to his physical disability only, and therefore his removal to the hospital for epileptics cannot easily be accomplished.

Neither of the above cases would have been admitted had those who made the certificates been familiar with the children now in the school and taken an equal interest in their welfare.

One efficient person at the school could visit all applicants for admission, make a comprehensive study of the vocational opportunities for cripples in the State, and, by a systematic visitation to discharged cases, greatly strengthen the educational value of the school. I would therefore recommend that the maintenance appropriation for another year be made to provide for a visitor or field worker.

#### DISCHARGED CASES.

Sixty cases were discharged during the year, including fifteen who were nominally returned from trial visits of previous years. Twenty left to continue their education in the public or private schools after an average residence of three and one-half years,



their average age being eleven years and eight months. Six boys were capable of self-support, having been trained as follows: one as a licensed fireman; one became proficient in the operation of steam laundry machinery; one found employment as a clerk in a store; one as an assistant to a job printer; one secured employment as a gardener's assistant; and one, a legless boy without friends to assist him in finding employment, is acting as telephone operator at the school until a better opportunity can be found. Four were regarded as capable of partial self-support. A girl with but one leg, which was partially paralyzed, and who was confined to a wheel chair, was very skillful in needlework; a boy with extensive paralysis of legs, arms and back, but with a bright and well-trained mind, looked forward to the management of a news stand and cigar store; and two spastic paralytics, not keen mentally but able to do work of a simple kind, left to go under mild supervision in private families. Four were mentally deficient. Seven were taken against advice to satisfy parents who were either lonesome without their children or ambitious because of marked improvement to have them continue some special study at home. Seven failed to return from visit and they were accordingly discharged at the close of the year. Four were taken by parents because of misunderstanding over settlement matters with local authorities or a feeling that public relief meant pauperization. Two were discharged on account of homesickness, one of whom has since asked to be allowed to return. Two were discharged to leave the State; one, suffering from a progressive form of paralysis, was transferred to another institution; and three children died. Death was due in all three cases to tuberculosis of long standing, which finally terminated in general tuberculosis and amyloid disease.

It is of interest to note that fifteen of those discharged during the year left with the school diploma, and that nine have entered high or technical schools or business colleges.

The average age of the ones discharged was thirteen years, three months, as compared to thirteen years, four months, which was the record for last year.

A review of the medical work for the year shows greater activity than ever before; and although the general health of the school has been remarkably good, the increase in population of

both children and employees has enlarged the demands upon the staff, which remains unchanged. The infirmary wards have been filled practically all the time, and occasionally extra beds have been added for special cases. Daily observations have been made upon every child in the institution, weight records taken each week, and case histories amplified for future reference and study.

The assistant physicians have received much valuable advice and instruction from the consulting orthopedic surgeons, who have visited throughout the year for the routine examination of newly admitted cases, and at other times whenever called in special emergencies. Such a great amount of uncompensated service which busy specialists give to the Commonwealth is deserving of the highest praise.

Two hundred and fifteen photographs and 190 X-rays have been taken to supplement the careful physical examinations, including blood and urinary analyses, which are now made in all cases admitted.

All employees who have to do with the handling of food, including milk, have been examined for the detection of any possible carrier of typhoid.

Three children and one nurse were quarantined for diphtheria during the year the cases occurring independently of each other, appearing in February, April, May and October. One case of measles appeared in January and ten mild cases of chicken pox in January and February.

The eagerness with which some of the older boys and girls have consulted the dentist and followed his instructions in mouth hygiene testifies to his tact in dealing with children, and the results accomplished emphasize the great importance of his work. There has been a marked absence of badly abscessed teeth, and some of the mouths examined needed no attention, in marked contrast to the conditions presented by the same children upon admission. During the year 149 cases have been treated and 329 dental operations performed as follows: amalgam fillings, 66; cement fillings, 30; gutta-percha fillings, 7; and root fillings, 17. There were 11 pulp removals, 28 extractions and 87 cleanings.

Nevertheless, more work should be accomplished than is possible in the time now assigned to the dentist. By doubling



the work at an approximate additional cost of \$300, the teeth of every child in the institution could be thoroughly cleaned and treated at least once during the year.

For the purpose of study, all the cases of hip joint affections admitted since the institution was opened were analyzed at the close of the year. As might be expected in a group made up of cases thought unsuitable for home care or treatment in a general hospital, most of them were found to be in the chronic stage, some had been neglected, and others had not been given proper treatment.

In this most unpromising collection of 102 cases, the mortality was found to be but 12 per cent. Of the ones who died, 92 per cent. had deep abscesses, amyloid disease or discharging sinuses when admitted, and gave a history of having suffered from hip disease upon an average of more than four years previous to entrance. After excluding 6 cases who left against advice, and 57 children, or 56 per cent., still under treatment, the remainder were found to have been discharged as capable of self-support or of attendance in public schools with normal children.

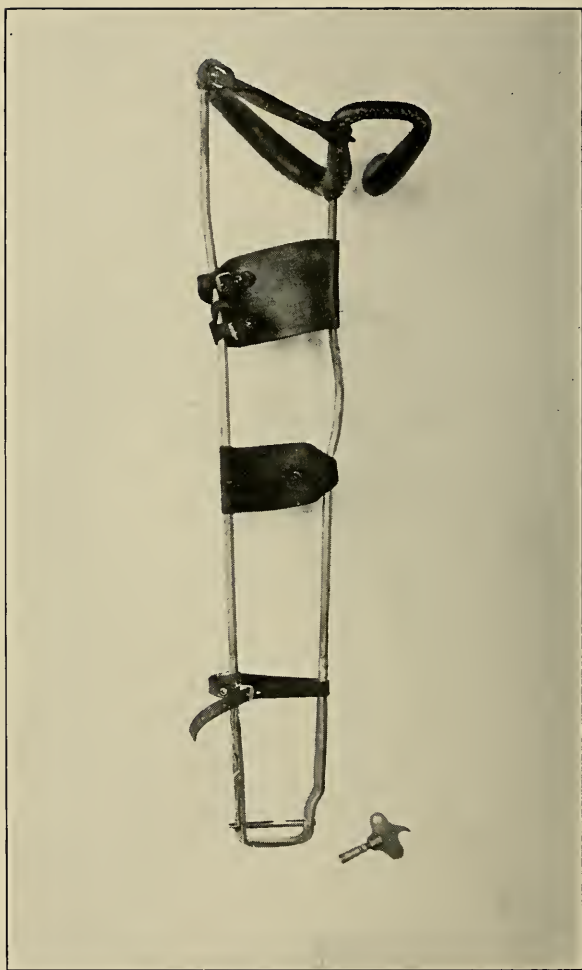
A review of the 57 cases remaining under treatment showed that 28 per cent. had discharging sinuses upon admission and that after an average residence of three and one-half years the rate dropped to 16 per cent. The average gain in weight for the same period was found to be 31 pounds.

It may be of interest, not only to the public, but also to the medical profession for guidance in the management of similar cases elsewhere, to know what mechanical treatment has been given in addition to the constitutional treatment which is such an important feature of the school.

As a routine practice all the cases suffering from hip disease have been sent to the infirmary immediately upon entrance for observation and a careful physical examination. Plaster casts, splints and every other form of apparatus worn upon admission have been removed and the patient placed upon a bed frame.

Whenever traction has been indicated, extension has at first been applied to the affected hip by means of weights and pulleys over the foot of the bed. Children with hip disease do not thrive when closely confined for a long time in bed, even





Traction abduction hip splint.

when placed in an attractive hospital ward, and so it has been found advisable in the vast majority of cases to allow the patients to get up within the first two weeks with the hip securely immobilized in the abducted position by means of a traction splint designed several years ago for use at the Boston Children's Hospital. The splint is a simple one which can be readily made by an average mechanic. It may be briefly described as a perineal crutch made of 5-16-inch cold rolled steel rods, shaped to conform to a line extending from just above the great trochanter of the affected hip obliquely over the buttock to the tuber ischii forward under the perineum and upward to a point just above the symphysis pubis. The abduction portion is made by extending the incomplete ring thus formed transversely above the symphysis, then downward and backward in a corresponding line under the perineum of the well side just far enough to prevent uncomfortable pressure upon the buttock when the patient is seated. Both portions are well padded, covered with felt and leather, and the anterior points of the first portion connected by a leather strap and buckle. Rods of the same size of steel securely welded to the ring and extending downward upon either side of the leg are joined at the bottom about two inches from the foot by a transverse bar and ratchet designed to receive the extension tape. The ratchet is operated by means of a small wrench and the amount of traction required easily obtained. Broad leather bands at the ankle, knee and the middle of thigh serve to steady the leg. When traction is no longer indicated and the extension removed, the splint may still be worn to advantage to protect the joint and relieve new tissue from full weight-bearing pressure until it can with safety be gradually removed and eventually discontinued altogether. With a high shoe under the sound leg to afford clearance to the splint, and a pair of crutches, our cases of hip joint disease have enjoyed the health-giving qualities of exercise and play out-of-doors. Keener appetites with increase in weight, brighter eyes and happier expressions, freer motion with less deformity and many recoveries have been the result.

Whenever the weather conditions have been unsuitable for the children to be out-of-doors, and even after they have re-

tired for the night, pure outdoor air has still been directly supplied, and, what we have come to regard as equally important, the impure air has been directly removed.

This has been possible by the decision of your Board to reject the artificial methods of ventilation in common use and to adopt the less expensive but more desirable principle of emptying the contaminated air through a long opening in the ceiling. There have been so many requests for a published report of your reasons for indorsing such simple and unusual forms of ventilation that it may not be out of place to present at this time some of our observations upon the subject, which is so much discussed but so generally disregarded in practice.

#### VENTILATION.

The ventilation standards generally adopted are not based upon knowledge gained from a practical study of the physiological aspects of the question. Indeed, the subject of ventilation has been very largely left to architects and engineers without the co-operation of the medical profession, which a public health problem of such great importance demands.

The exact cause of the ill effects of bad ventilation have not been determined. The permissible amount of carbon dioxide as an indication of good ventilation has been fixed by some at not more than eight parts to ten thousand, and yet it has been claimed by others that the quantity of carbon dioxide is of no importance whatever. There appears to be no clear explanation either for the oppressive influence of an ill-ventilated room or for the exhilaration produced by the free inhalation of pure air out-of-doors.

It has been shown that with ventilation generally acknowledged to be good, anywhere from 1 to 10 per cent. of the expired air is rebreathed, but just how or to what extent re-breathed air affects tissue metabolism is not known. Whatever theories may be urged in the explanation of the injurious effects of bad ventilation, all agree that fresh air is better than stale or foul air, and that economy in the construction of buildings as well as the cost of furnishing fresh air are factors to be considered in any practical method of ventilation.

That the usual plan of ventilating hospitals and schools is expensive and unsatisfactory needs no argument. It is simply

necessary to visit the wards of a hospital at midnight or a crowded school in the afternoon session to find a convincing demonstration of the lack of fresh air. The same is true of the ordinary bed chamber as compared with living out-of-doors or tent life. The query is natural, if tent life is healthier than that in a house, cannot our hospitals, schools and houses combine the fresh air of a tent with the convenience of a house? Tent life is inconvenient, and outdoor porch sleeping in winter exposes patients and nurses to the hardships of cold weather. If these and similar objections could be avoided and at the same time stale air prevented or reduced to a minimum, the advantages would be indisputable.

It should be borne in mind by those who question why the elaborate and expensive systems of ventilation which have been installed in hospitals have so often been abandoned as undesirable, when the same systems have been found to be satisfactory in certain other public buildings, that hospital wards are never vacant, while theatres and schools, for example, are occupied irregularly or but a portion of the time. It is probable that no indirect systems are exclusively relied upon, but that they are largely supplemented by direct ventilation.

An office building or lecture hall can be aired when not in use, but it is an undertaking of greater difficulty to furnish twenty or more patients shut up day and night in a sick room with an adequate supply of constantly renewed air at a regulated temperature under proper control. Ventilating a theatre is a different problem from ventilating a hospital, and this again differs from the ventilation of a school, while each presents conditions unlike those in a private house.

Sanitarians have in problems of ventilation considered chiefly the furnishing of carbon dioxide free air and the removal of air overcharged with carbon dioxide. Unfortunately the problem is more complicated. Go to a crowded committee room at the State House, to a crowded court room or to any large reception, and it will be evident that it is not carbon dioxide that needs to be feared.

Any system which disseminates dust and does not keep air-bearing flues free from the collection of dust is faulty. Fan ventilation depending upon flues and the attention of a janitor desirous of an economy of coal is not always to be relied upon,



nor are dark, inaccessible flues inspected with difficulty certain to be free from dust infections or stale air.

Proper ventilation cannot be obtained by opening doors or windows or even by the removal of the entire outside wall of a room, especially if the wind blowing towards the opening causes the stale air to be banked against the opposite side. Again, ventilation by air currents, whether directed by flues or by open windows, is manifestly defective if planned so that exhaled air of one individual must be inhaled by another.

If air is to be regarded as a fluid, it is not easily flushed at corners, and it is unreasonable to expect that foul air pocketed in many corners of a room can be displaced by air forced into the room through one relatively small opening and effectively removed through an equally small exit.

It has been claimed that the evil is minimized in a building or room which has a sufficient amount of cubic air space, as if that gave fresh air, instead of an increased amount of contaminated air.

Can a pool be cleaned by a small, slow, gentle stream of water coming in and an equally small one trickling out? Could fish live healthily if kept in the more distant portions of the filthy pond undisturbed by any current of the entering water?

Ventilation is simply the best method of changing stale air, a change which takes place constantly in a chimney when a fire is lighted below. If, however, a fire is lighted in a brazier in a room and a window is opened, the same change of air does not take place as occurs in a chimney.

If further we suppose a vent into a room through which air is forced, and another vent from which air can escape, will the stale air in the corners of the room or above and below the vents be removed, and how quickly? The same question can be asked if the air is sucked out of one vent and admitted at the other.

Is the problem an insoluble one? A careful study of the results which have been recorded for eight consecutive years leads to the conclusion that it is not, and your endeavor to improve the health of a particular class of physically defective children gives promise of relief to others for whose welfare better ventilation is indispensable.

It will be recalled that the first convincing proof of the in-

adequacy of the ventilation which is customary in schoolhouse construction was emphasized in 1908, when one hundred and four sickly and infirm children were under treatment. Our schoolrooms were then equipped with an expensive apparatus designed to provide indirect heat and ventilation, while the sleeping wards in the same building were more simply planned. They had many windows and a monitor roof similar to the shacks commonly built for the tuberculous, but were so arranged that they could be closed and heated to any desired temperature by steam radiators, and the interior walls were plastered and painted to give a more finished and comfortable appearance.

The children were too feeble to attend school more than an hour and a half a day, and with the frequent change of classes the room was filled with outdoor air by opening doors and windows often enough so that the ventilation was never considered bad by the teachers or those who occupied the room. To visitors and officials, however, who went directly from one room to another, the schoolroom air was decidedly foul and oppressive when compared to that in the wards even at the same temperature. The air in the wards never seemed close or stale, even late at night when filled with sleeping patients. The advantages of the ward ventilation were also shown by the decided gain in weight, increase of hemoglobin, absence of colds and tonsillar affections, and the general improvement in the condition of the children which could not be satisfactorily attributed to other causes.

Following your suggestion another practical observation was made by filling the two rooms with a smudge in order that the air currents might be seen and the relative length of time required to clear the rooms determined. Care was taken to make the indirect system as efficient as possible, the acceleration coils were kept in perfect operation, the heating chamber in the basement clear and clean, the flues free from obstruction and the windows and doors closed. The smoke was seen to move rapidly in a circular course away from the top entrance flue and towards the exit below, its course of travel gradually increasing towards the middle of the room and finally extending to the opposite wall. The corners of the room and the spaces above and below the flue openings were the last to become clear. It

required thirty minutes before the room was entirely free from smoke. As we studied the smudge, we wondered if human lung excretion could be more quickly or effectively removed from an occupied room, and what mysterious influence it would have upon the circulation of those who breathed it and rebreathed it again and again.

The sleeping ward was filled with a smudge of the same density, and when the monitor windows were opened the room cleared in a few seconds as positively as smoke travels out of a chimney.

These practical observations and the tendency of gases to cling to surfaces led to the belief that future buildings designed for the care of the class of children the Hospital School is intended to receive, should be constructed without corners for the pocketing of stale air and to provide for a natural upward current which would wash the air of the whole room.

As another illustration of the problem of ventilation, the following experiment was tried. Two small boxes were made of glass. The top of one of these boxes was flat, whereas in the other the top sloped on both sides to the middle, an opening being left at the point where the two sloping sides met. A similar sized opening was made in the middle of the cover of the flat-topped box. It was found that if a smoking cigarette was placed in the bottom of each of the boxes, that the flat-topped box would fill with smoke, while the other, having a top with sides sloping towards the middle, would remain relatively clear, the smoke rising rapidly upwards to the opening. In the flat-topped box the smoke after rising to the top descended as if rebounding, except a very small portion which escaped through an opening in the center. If instead of a top opening in the flat-topped box, one at the side was made, or one on opposite sides, the box did not clear itself of smoke as readily as in the sloping top box with a ridge opening.

In order to make a more practical test and to determine at what angle the air current most readily flowed, a flat-roofed, one-room henhouse was built with openings at the top of the sides. After repeated tests under various atmospheric conditions, sloped ceilings to an opening in the center were placed at different angles and the same tests repeated.



FIG. I.

FIG. II.



FIG. III.

FIG. IV.

GLASS MODELS SHOWING SMUDGE TESTS.

FIG. I. — One side open.

FIG. II. — Two openings on opposite sides.

FIG. III. — Two-ceiling slope to central or ridge opening.

FIG. IV. — Ceiling flat, with central opening of the same size as in Fig. III.





The result was conclusive, substantiating the idea that the best way to ventilate a room is to prevent corners where air can pool, and to give the rising warm air a chance to escape.

There is nothing new in a system of roof ventilation. It is as old as the chimney, if not older. There is nothing new in a hole in the roof. It is the principle of the Indian wigwam, the sides of which slope to a top vent. Cube-shaped rooms are not used in greenhouses. Both of these indicate how fresh air can be freely and economically secured. We cannot all live out-of-doors or in a chimney, but the benefits of the former and the principles of the latter can be utilized to improve health.

This can be done by a sloping or rounded ceiling with a top vent suited to the intake. Little difficulty will be met in arranging for an upward current in a room filled with people if the top opening is not too large or if it is made small enough to prevent a downward current. By placing steam coils in the room any amount of heat can be obtained, nor is the question of air ingress a troublesome one if top egress is furnished. If doors and windows are inadequate, these can be supplemented by as many openings as may be found necessary for fresh air to enter.

The artificial methods of ventilation have some advantages, especially in cold climates, but the dangers from deterioration and contamination of the air in its passage through heating chambers and dark inaccessible ducts are necessarily great, and experience has shown that it is practically impossible to displace by artificial means the foul air of an occupied room before a certain amount becomes diffused with the incoming air and is breathed more than once.

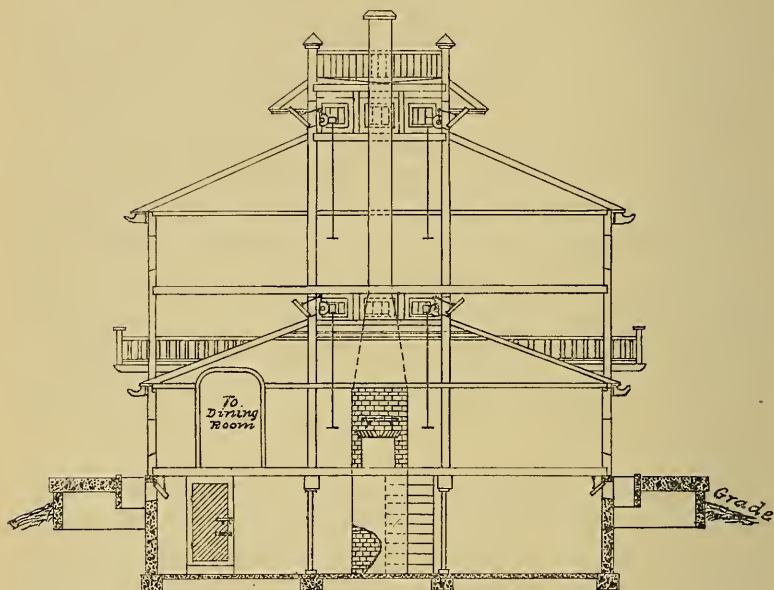
The school now has eight directly ventilated monitor-roof wards in five different buildings, which accommodate two hundred and forty children. We have come to regard two other buildings, with accommodations for sixty-two children, as wholly unsuited for any except the most robust and convalescent cases.

It is a significant fact that for a period of eight consecutive years, during which time five hundred and seventy-seven children have been under observation for an average of two years, eight months and eight days, but two cases of pneumonia or



bronchitis have been observed, and both were children with spastic paralysis who had imperfect control of the muscles of deglutition and were unable to clear the throat of food or mucus.

A cross section of the last cottage to be erected will indicate how the monitor-roof principle can be applied to buildings of more than one story.



The ordinary repairs, which accumulated somewhat during the past two years on account of the time the regular mechanics devoted to special work, are gradually being brought up to date. All repair work is being done not merely with a view to producing an equivalent of the original production of contract labor, but in the most thorough workmanlike manner for more permanent results, to reduce maintenance expenditures in the future.

The wooden platform in front of the east wing of the east dormitory was replaced with a granolithic surface upon a solid foundation of stones and gravel. During the coming winter, when the teams and men are not needed for work on the farm, many loads of stones which were removed from the tillage land during the summer will be hauled to furnish foundation

for the extension of the granolithic surface to the west wing of the same dormitory in the spring.

Forty-three concrete fence posts have been made by one of the boys, under the direction of the carpenter, for a permanent fence extending east from the cow barn, and other posts are being made to replace as rapidly as possible those in the line fences.

The infirmary and industrial building have been given two outside coats of paint, and twelve additional rooms have been finished in lead and oil in place of the original kalsomine. A basement room, 21 feet wide and 100 feet long, extending across the north side and west end of the administration building, has been built for the storage of dry goods and food supplies, the small storerooms previously provided having been found to be entirely inadequate to our needs.

A large number of broken windows, 414 panes of glass being set during the year, would indicate that some scheme should be devised in the interests of economy to prevent a continuance of such extensive breakage in the future. The helpless condition of our patients, however, and the inability of many of them to get away from the buildings in their play, together with the fact that windows are seldom broken maliciously, do not give promise of much improvement in this respect.

When the tar and gravel roofs and skylights were given their customary fall examination, many more repairs were made than has heretofore been necessary, and provision has been made in the maintenance estimate for the ensuing year for a renewal of the congregate dining-room roof before another winter.

An incinerator, having 12-inch walls of reinforced concrete, has been built just east of the boiler house. It was made to connect with the boiler house chimney, and has a capacity of 125 cubic feet. Being operated in connection with the work of a regular fireman, its use greatly minimizes the danger from fire and affords a most satisfactory means of disposing of a great amount of rapidly accumulated rubbish as well.

In the management and repair of splints and the various forms of orthopedic apparatus, the engineering department has been especially successful. When it is considered that such work has been done without the addition of more men than would be required for the regular maintenance of the heat,

light and power plant, the advantage becomes apparent. Three hundred and twenty-five hip, knee and caliper splints were repaired, and 46 caliper plates, 10 foot plates and 27 new splints were made.

Another important department of maintenance, in which the wear and tear incident to the care of a large number of children is appreciated, is the sewing room, where it is estimated that the following repairs have been made: 14,000 pairs of stockings, 8,600 shirts, 2,500 dresses, 1,750 bloomers, 150 aprons, 1,500 E. Z. waists, 1,450 nightgowns, 600 coats, 3,800 pairs of pants, 7,890 blouses, 6,750 pairs of drawers, 1,460 bedspreads, 950 sweaters, 150 laundry bags, 1,400 sheets, 60 tablecloths, 150 pairs of overalls. The following new work was turned out: 112 dresses, 88 pairs of bloomers, 108 E. Z. waists, 174 nightgowns, 37 coats, 102 blouses, 252 face towels, 66 roller towels, 60 tray covers, 68 bureau covers, 14 bed-frame covers, 12 bakers' caps, 6 laundry bags, 26 tablecloths, 71 pairs of curtains, 5 princess slips, 21 corset covers, 17 petticoats, 27 aprons, 5 negligee shirts, 4 pairs of overalls, 5 State flags, 84 draw sheets, 396 pillow slips and 894 sheets.

In my report of last year I described the deep well which was drilled into bed rock to a depth of 404 feet and 9 inches, and gave a supply of water somewhat in excess of 20 gallons per minute. This year a competent engineer was employed to assist in the solution of the problem of how to conserve the investment to the best advantage by reducing the fire risk and providing storage which could be utilized in connection with any future supply which the growth of the institution might make necessary. For several days, three hour meter readings were made of the amount of water purchased from the town to determine the relation between the day and night draft; and after a most exhaustive study of the whole situation it was decided to install a five horse-power motor-driven deep well pump, and to construct an elevated steel pressure tank of 30,000 gallons capacity. A 6-inch pipe was laid from the small pump house at the well to the tower, which was erected upon the elevated ground just north of the industrial building. The water tower structure consists of a steel tank with a roof and hemispherical bottom, supported on four steel columns, the

distance from the top of the concrete foundation to the top of the expansion joint within the tank being 100 feet.

Connection was made with the 6-inch town main at the east end of the administration building by an extension of the 6-inch pipe from the tower. By means of shut-off valves at both ends of the pipe connecting the elevated tank with the town main, and one on the Randolph Street side at the point where the two systems join, it is possible to use either the town or the home supply independently, or to supplement either one by the other, and in an emergency both systems could be used.

The well water was found by chemical analysis to be undesirable for the boilers or for laundry purposes, and a 2-inch pipe was laid for a supply from the 6-inch town main, the same trench being used for both pipes except for the short distance between the pump house and boiler room.

Contracts for the deep pumping apparatus and water tower were awarded to the lowest competitive bidders. All the other work, including pump house, tower foundations and connections to the motor, was done by employees of the institution at a total cost well within the original appropriation, which will be closed by the return of an unexpended balance to the State treasury as soon as the final payments for the tower have become due and are paid.

The system thus far has been satisfactory. By running the pump at 21 revolutions per minute, its present maximum capacity, the well discharges about 22 gallons per minute, and continuous pumping never lowers the water below 96 feet from the top of the well. At 17 revolutions per minute, with a yield of 18 1-10 gallons, the water maintains a level of 63 feet from the surface. The average consumption since the plant has been in operation has been 20 gallons per minute.

The milk house, which was also described in my last report, has been completed and a combination mixing tank and pasteurizer has been installed. As soon as some lockers for the milkers' clothing and some other minor equipment can be provided, the account will be closed within the sum appropriated under chapter 76, Resolves of 1914.

The new cottage for girls, which was practically completed



in the spring but not occupied until a few weeks ago because of maintenance appropriation restrictions, marks the close of the original building appropriation with an unexpended balance of 19 cents. The assembly hall appropriation was also closed during the year by a return to the State treasury of \$90.17.

Any reference to the teachers and the educational advantages of the school would be incomplete if it did not include many employees, by whose example and instruction the children have acquired skill upon work of great practical value. Any child who manifests interest in a particular branch of the work in the institution is usually given an opportunity to become a voluntary assistant or an apprentice to the employee who is held responsible for the work. An employee's efficiency is frequently measured by the number of pupils who find his work attractive; and whether it be gardener, engineer or farmer, stenographer, laundress or cook, each one who remains upon the pay roll becomes in certain respects a teacher. There are vocational instructors who devote their whole time to teaching and are included in the educational department, but close reciprocal relations exist between all departments for the educational advancement of the pupils.

We have at present in the regular teaching force four grade teachers, one for sewing, one for domestic science, and one for arts and crafts. The band also has its teacher at regular intervals. There has been no change among our teachers this year, with one exception. Miss S. Cecile Cohen resigned after one year of service, and her place in the intermediate grades was filled by the appointment of Miss Ethel A. Baker, a normal graduate of several years' successful teaching experience, supplemented by a course at the Boston School for Social Workers.

The head teacher submits the following report of her department: —

The opening of our regular classroom work in September finds us as usual with overflowing lists. Until another grade teacher is provided for the work, it has been necessary to put our beginners' class, the B division of the subprimary, upon a half-time schedule. We also need greatly for our younger children classroom work in elementary handicraft. Our basketry and other industrial classes turn out commendable

work, but they provide for the older pupils and those who have some special aptitude for certain lines of occupation.

Training for skill of hand can and should begin very early in the life of a child. It should be a part of the education, not only of the one naturally gifted with manual deftness, but of the one who is even below the average, or handicapped beyond the possibility of producing work of economic value. Some such instruction is at present carried on, but we need a great enlargement of that field.

The holidays have been observed as usual. The graduating class of 1915 presented at the June exercises an original dramatic sketch entitled "Life at the Massachusetts Hospital School." The lively interest and school spirit evinced by the members of the class was most gratifying.

During the school year 1914-15 the use of the library, through the addition of new books and periodicals, has been much increased. The room was kept open on two days of each week for reading and the circulation of books. A comparison of the circulation record of June 12, 1914, with the corresponding dates of the present year, shows an increase of over 318 per cent. We send out from sixty to one hundred books each week. The interest taken by the children was sufficient to warrant the setting aside of a daily afternoon library period through the summer. Under the hospitable guidance of one of the summer teachers, Miss Carrie E. Hale, the attendance was good. The daily reading-room period, under charge of one or another of the teachers, has been continued. There have been few days when the adjoining hall has not been opened to accommodate the overflow readers. One pleasant thing to see is the number of small children who come to look at the picture books or illustrated magazines. Even if they cannot read, they are acquiring a familiarity with the world of books.

Pupil assistants do most of the work of checking and charging books, recovering, and making magazine holders. With a sufficient yearly supply of new books and subscriptions for periodicals, this interest should increase with time. It is one of our most valuable educational assets. Our children, being mentally normal, take a lively interest in current events. To overbalance the effect of the somewhat secluded lives they lead,



it is necessary that they should have access to a wide variety of literature portraying important features of the world at large. In connection with this, the moving-picture exhibits given from time to time are also capable of much educational service.

During the year our printing class has set up and printed an outline of study for our grades. This has been carefully prepared to show, not what the grades are expected to do, but what is actually being accomplished in each year. Bright pupils are given an additional incentive to work for more rapid promotion, and all are stimulated to some extent by the use of these pamphlets for reference. A copy of the outline follows:—

#### SUBPRIMARY.

Names and sounds of letters. Writing numbers to 10. Counting to 50. Writing small letters, single words and sentences of short words. Spelling words from reading books. Reading from slips of paper and from the blackboard. Cyr's primer, Blodgett's primer, Aldine's primer.

#### GRADE 1.

*Arithmetic:* counting to 120, counting by 10's, by 2's. Writing the numbers to 120, combinations up to eight. *English:* phonic drill on 150 families of words from the Aldine Phonic Chart. Vowel and consonant drill. Writing capitals and small letters; writing from printed sentences; writing short sentences from memory. Names. *Spelling:* words from selected list and from reading books. *Reading:* Blodgett's primer; Progressive Road to Reading, Book 1; Overall Boys, Aldine's first reader; selections from Stepping Stones to Literature, Book 1.

#### GRADE 2.

*Arithmetic:* rapid oral drill; reading and writing figures not higher than 10,000; tables built up through 6's; the four processes; United States money; time; simple fractional work from concrete object. *Spelling:* based on text and on reading, simple abbreviations. *English:* sentence drill, statement, question, command and surprise. Dictation and oral reproduction of stories. Memorizing. *Reading:* two first readers; graded literature; Cyr's second reader.

#### GRADE 3.

*Arithmetic:* rapid oral drill; notation and numeration; tables completed. The four processes, using larger numbers; measurements commonly used; areas of rectangles and squares; addition and subtraction of simple fractions; beginning long division with divisions of two figures. *Spelling:* based on texts used. *English:* dictation; uses of capitals; letter

writing; oral and written reproduction of stories. Memorizing. *Reading*: one second reader reviewed; Jones' second reader; Jones' third reader; Stories of American Life and Adventures.

#### GRADE 4.

*Arithmetic*: rapid oral drill; notation and numeration, advanced; review of fundamental processes and their completion; simple denominate units; proper and improper fractions; mixed numbers and their addition and subtraction; decimals to three places. *Spelling*: from selected lists and from reading. *English*: dictation; review of letter writing; use of possessive; comma in address; comma in series; undivided quotations; oral and written reproduction; original composition; memorizing. *Reading*: Thirty Famous Stories Retold; Robinson Crusoe (De Foe); The Wonder Book (Hawthorne); Stories of Massachusetts; Fourth Reader (Stickney).

#### GRADE 5.

*Arithmetic*: factoring; greatest common divisor; least common multiple; continued study of common and decimal fractions; common denominate numbers; measurements; oral drill. *English*: reproduction based on geography and current events; original composition; letter writing; paragraphs; memorizing. *Spelling*: words from language work and reading, also from selected lists. *Reading*: The Story of the Greeks (Guerber); The Story of the Romans (Guerber); Tanglewood Tales (Hawthorne); Fourth Reader (Stickney). *Geography*: home and journey geography; King's Elementary Geography read in class.

#### GRADE 6.

*Arithmetic*: fractions reviewed, with special attention to decimals; percentage with simple business applications; oral drill. *Geography*: The United States, emphasizing industries. *English*: original composition; papers based upon geography; history and reading; poems studied. *Spelling*: drill on selected lists of words from written work. *Reading*: Our Country's Story (Tappan); The Story of the English (Guerber); Grandfather's Chair (Hawthorne); Snow-bound (Whittier); Rip Van Winkle, and Legend of Sleepy Hollow (Irving).

#### GRADE 7.

*Arithmetic*: bills and business arithmetic; interest; general review; oral drill. *History*: the colonial period in the United States, through the revolution. *English*: the parts of speech distinguished; simple sentence analysis; composition and spelling as in previous years; poems studied. *Geography*: the countries outside the United States. *Reading*: The Friendship of Nations (Gulliver); The Last of the Mohicans (Cooper); Evangeline, and the Courtship of Miles Standish (Longfellow); selections, Jones' seventh reader.

## GRADE 8.

*Arithmetic*: elementary bookkeeping; business forms; arithmetic review; oral drill. *History and civics*: the growth of the United States to present day. Current events. Study of the forms of government and the duties of the citizen. *Geography*: commercial and industrial. *English*: inflections and more advanced analysis; composition and spelling as before. *Reading*: The Lady of the Lake (Scott); A Christmas Carol (Dickens); The Merchant of Venice (Shakespeare); Enoch Arden (Tennyson); Silas Marner (Eliot); The Vision of Sir Launfal (Lowell).

## INDUSTRIAL TRAINING.

*Sewing*.—This is given in graded classes once a week to all girls over eight. The course is progressive and an effort is made to have all articles of practical utility.

*Household Arts*.—Instruction in cooking, serving meals and the care of all rooms in a house is given in cottage groups to girls whose physical condition permits.

*Handicrafts*.—A special teacher gives training to selected classes in work varied from year to year. Simple design, stenciling, sheet metal work and basketry have been taught. Other industrial instruction is given in cobbling, tailoring and printing classes.

The departments of the institution furnish opportunity for training in farming, painting, carpentry, fireman's duties, office routine, laundry work and a variety of other lines.

It is gratifying to review the work accomplished in converting land which was rough and unproductive a few years ago into gardens which are already supplying food of a quality which could not be purchased at the cost of production. The land has been cleared and each year improved by a few regular employees whose services are necessary for many other kinds of work not connected with the farm. It will soon be possible thoroughly to organize and systematize the work upon the land so that it will become one of the most important educational features of the school. The need for more land has been rendered temporarily less acute by the courtesy of the Metropolitan Park Commission in permitting the institution to make use of 7 acres known as the Polo Field on Turnpike Street.

An analysis of the farm account shows that 5,516 pounds of

pork has been produced, and the following crops harvested: 478 bushels of potatoes,  $82\frac{1}{2}$  tons of ensilage corn,  $75\frac{1}{4}$  tons (estimated) green feed (rye, oats, millet, Canada peas and grass),  $24\frac{1}{2}$  bushels string beans,  $25\frac{1}{4}$  bushels shell beans, 76 bushels beets, 14,615 pounds cabbage,  $121\frac{1}{2}$  bushels carrots, 157 heads cauliflower, 137 bushels sweet corn, 6 boxes cucumbers (table use),  $14\frac{1}{2}$  boxes lettuce, 35 bushels onions, 1 bushel parsley,  $73\frac{1}{2}$  bushels parsnips,  $28\frac{1}{2}$  bushels green peas, 8 bushels green peppers, 3,794 pounds pumpkins,  $8\frac{3}{4}$  bushels radishes,  $744\frac{1}{2}$  pounds rhubarb,  $29\frac{3}{4}$  bushels spinach, 10 barrels summer squash,  $372\frac{1}{2}$  pounds winter squash,  $56\frac{1}{3}$  bushels tomatoes, 10 bushels turnips,  $\frac{1}{3}$  box asparagus and  $9\frac{1}{2}$  bushels dry beans.

It has been demonstrated that milk of a superior quality can be produced at less cost than average milk of an uncertain grade can be purchased in this particular locality. The principle has been observed that the cost of producing milk in a public charitable institution should be kept within reasonable limits of the commercial standard generally accepted as a unit of comparison. Even with this point in view, it has been possible to give greater attention to the health of the cows and the sanitary condition of the barn and the utensils for handling milk than is observed in the average dairy. Intelligent milkers have been employed, instructed and placed under medical supervision. They have also been examined for typhoid and other infections.

Whenever a cow has shown signs of indigestion, loss of appetite or other symptoms indicating possible illness, it has been deemed sufficient cause for removing her from the herd to another barn on the east side which has been used for quarantine purposes. One cow died during the year and by autopsy the cause was found to be traumatic septic pericarditis, due to a piece of wire which had been swallowed and had penetrated the wall of the stomach through the pericardium into the heart muscle.

The cost of milk production for the year, based upon the most careful estimates and including interest upon capital invested, was found to be \$0.0558.

An increasing number of friends have shown a kind interest by making individual calls upon children who otherwise would not have received visitors, and upon several occasions auto-



mobiles have been sent to take such children to private homes or lawn parties where they have been entertained for the afternoon.

Hundreds of unsolicited gifts have been received throughout the year, and especially at Christmas time, from women's clubs, church societies and Sunday schools.

Physicians, members of the Legislature and others who have had occasion to visit the school have afterwards sent unexpected tokens of friendship which have been greatly appreciated. One particularly interested friend gave a check for \$100, which has been added to the sum already invested for the assistance of worthy graduates of the school, and other checks have been sent to be expended for members of the mandolin club and the band. Reference should be made to the gift of two donkeys with saddles, harnesses and cart and to the piano given by other friends, as well as the substantial gifts which have been received from the homes of the trustees.

In October the school was honored by a visit from the members of the Norfolk branch of the Massachusetts Medical Society. The members of the Boston School for Social Workers visited in June, and smaller delegations of physicians, nurses and teachers have called to inspect the school during the year. It has been customary upon such occasions for some member of the staff to address the visitors at a meeting in the assembly hall, where some principles to be observed for the prevention of crippling deformities, as well as the methods employed in their correction, have been illustrated by a clinic or the use of the stereopticon lantern.

The expenditure of \$80,065.48 for maintenance for the year divided by 262.18, the daily average number of patients, gives a weekly per capita cost of \$5.872, which is \$0.028 less than the cost last year.

Income from all sources for the year amounted to \$45,255.92.

Much greater detail is carried on in the matter of accounting than was thought to be necessary a few years ago. In fact the demands upon the clerical force have doubled since the administration building was erected.

Provision has been made in the maintenance appropriation for the employment of additional clerks to keep pace with the

increased demand, but owing to the lack of adequate office room, some of the bookkeeping is still carried on in the general reception room.

Plans and specifications have been prepared for enlarging the administration building to provide suitable office accommodations, a fireproof vault for our records, an employees' dining room and a bakery, at an estimated cost of \$26,000.

In recommending that the amount be appropriated, I also wish to call your attention to other needs of the institution, some of which have been referred to in previous reports in anticipation of the time when definite estimates could be proposed and legislative action consistently urged.

A set of scales for weighing products of the farm and verifying weights of supplies produced in large quantities should be provided at a cost not exceeding \$750.

Some well-stocked poultry houses, as a means of providing food for our tables and teaching a desirable vocation to some of our boys, are recommended at a cost not to exceed \$1,000.

An extension of the granolithic walks, a total distance of about fifteen hundred feet, is an absolute necessity to the safety of our patients, for which another \$1,000 should be requested.

An appropriation of \$2,000 for a simple but substantial slaughter house and piggery would prove a profitable investment.

Ice purchased of local dealers is expensive, and the objection to the small and frequent shipments of food is obvious. An ice house to be filled from the nearby pond and larger refrigeration could be provided at a cost not exceeding \$1,500.

An automobile truck could doubtless be operated to advantage in the delivery of coal, for which we are now obliged to pay a haulage rate of about 85 cents per ton. The 1,100 tons of coal purchased this year was delivered by a motor truck from the Canton Junction station, a distance of  $2\frac{1}{2}$  miles from our coal pocket, at the rate of  $5\frac{1}{2}$  tons an hour and but three men were employed in shoveling. We could use a truck for other freight as well. The estimated cost of truck and suitable garage is \$5,000.

A 6-inch water main should be extended about five hundred feet in order that three additional hydrants may be installed



near three wooden buildings which are inaccessible from the high-pressure main. The extension can be made by our own workmen at an estimated cost of \$900.

The close proximity of our buildings to neighboring land renders it practically impossible to keep our children from trespassing on adjoining property. Much needed opportunity for extension could be provided at an estimated cost of \$10,000.

In closing I wish to refer, with grateful appreciation, to the most loyal and enthusiastic corps of officers and employees which has been developed as a direct result of the harmonious work of the trustees in directing the policy of the school.

Respectfully submitted,

JOHN E. FISH,

*Superintendent.*

## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations on the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Totals.
Amputation of leg, . . . . .	1	—	1
Congenital deformity of fingers and scoliosis, . . . . .	1	—	1
Congenital paraplegia and scoliosis, . . . . .	—	1	1
Deformity of face and hands from burns, . . . . .	1	—	1
Deformity of shoulders, . . . . .	1	—	1
Double congenital dislocation of hips, . . . . .	—	2	2
Infantile paralysis, . . . . .	12	5	17
Multiple joint disease, . . . . .	1	—	1
Rachitic deformity, . . . . .	1	1	2
Scoliosis, . . . . .	1	1	2
Septic lymphangitis, . . . . .	1	—	1
Spastic paralysis, . . . . .	6	3	9
Spina bifida paralysis, . . . . .	—	1	1
Tuberculous disease of the hip, . . . . .	8	1	9
Tuberculous disease of hip and spine, . . . . .	2	—	2
Tuberculous disease of knee, . . . . .	1	—	1
Tuberculous disease of spine, . . . . .	2	1	3
Undiagnosed, . . . . .	—	1	1
Totals, . . . . .	39	17	56

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	44	16	14
Other New England States, . . . . .	6	1	2
Other States, . . . . .	3	4	1
Total native, . . . . .	53	21	17
Other countries: —			
Austria, . . . . .	—	1	1
Canada, . . . . .	1	6	9
Cape Verde Islands, . . . . .	—	1	1
England, . . . . .	—	2	2
France, . . . . .	—	—	2
Hungary, . . . . .	—	1	1
Ireland, . . . . .	—	7	8
Italy, . . . . .	—	4	4
Portugal, . . . . .	—	1	—
Russia, . . . . .	—	2	2
Scotland, . . . . .	1	1	1
Total foreign, . . . . .	2	26	31
Unknown, . . . . .	1	9	8
Totals, . . . . .	56	56	56

## VALUATION.

Nov. 30, 1915.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building, two dormitories and power house, . . . . .	147,184 08
Equipment for heat, light and power, . . . . .	6,883 47
Infirmary, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn, . . . . .	3,000 00
Two isolation houses, . . . . .	501 00
Isolation barn and henhouse, . . . . .	280 00
Four portable hog cots, . . . . .	200 00
Shop, . . . . .	150 00
Granolithic walks, . . . . .	2,370 06
Water system, . . . . .	7,115 95
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	136 86
Milk house, . . . . .	739 91
<hr/>	
Total, . . . . .	\$290,980 84

## PERSONAL PROPERTY.

Food, . . . . .	\$3,338 48
Clothing, . . . . .	4,186 35
Furnishings, . . . . .	26,824 31
Heat, light and power, . . . . .	5,979 23
Repairs and improvements, . . . . .	3,577 07
Farm, stable and grounds, . . . . .	11,432 83
Miscellaneous, . . . . .	6,222 39
<hr/>	
Total, . . . . .	\$61,560 66

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1915:—

### CASH ACCOUNT.

Balance Dec. 1, 1914,	\$1,776 56
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*Receipts.*

*Institution Receipts.*

Board of inmates:—		
Private,	. . . .	\$1,151 92
Cities and towns,	. . . .	33,940 45
Reimbursements, charitable		
(State minor wards),	. . . .	9,786 41
		<hr/>
		\$44,878 78

Sales: —

Clothing and materials, . . . .	\$59 51
Furnishings, . . . . .	4 50
Repairs and improvements, . .	3 85
Farm, stable and grounds:—	
Cows and calves, \$20 50	
Goats, . . . . 124 00	
Sundries, . . . . 2 28	
	<hr/>
	146 78

214 64

Miscellaneous receipts: —

Interest on bank balances,	.	\$40 23
Sundries,	. . . . .	122 27

162 5045,255 92

*Receipts from Treasury of Commonwealth.*

Maintenance appropriations:—

Balance of 1914, . . . . .	\$479 09
Advance money (amount on hand November 30), . . . . .	6,800 00
Approved schedules of 1915, . . . . .	70,403 29

77,682 38

Special appropriations,	.	.	.	.	.	\$9,966 96
Less returned,	.	.	.	.	.	86 80

9,880 16

[illegible]

*Payments.*

To treasury of Commonwealth, institution receipts, . . . . .		\$45,255 92	
Maintenance appropriations: —			
Balance November schedule, 1914, . . . . .	\$2,441 18		
Eleven months' schedules, 1915, . . . . .	70,403 29		
November advances, . . . . .	4,088 20		
			<hr/>
			76,932 67
Special appropriations: —			
Approved schedules, . . . . .	\$9,880 16		
Less advances, last year's re- port, . . . . .	185 53		
			<hr/>
		\$9,694 63	
November advances, . . . . .		24 81	
			<hr/>
			9,719 44
Balance, Nov. 30, 1915: —			
In bank, . . . . .	\$2,343 71		
In office, . . . . .	343 28		
			<hr/>
			2,686 99
			<hr/>
Total, . . . . .			\$134,595 02

## MAINTENANCE.

Appropriation, . . . . .	\$82,282 00
Expenses (as analyzed below), . . . . .	80,065 48
	<hr/>
Balance reverting to treasury of Commonwealth, . . . . .	\$2,216 52

*Analysis of Expenses.*

Salaries, wages and labor: —		
John E. Fish, M.D., superintendent, . . . . .	\$2,750 00	
General administration, . . . . .	13,371 54	
Medical service, . . . . .	1,748 69	
Ward service (male), . . . . .	2,834 50	
Ward service (female), . . . . .	9,414 52	
Repairs and improvements (labor not on pay roll, \$77.26), . . . . .	2,293 48	
Farm, stable and grounds, . . . . .	2,142 54	
		<hr/>
		\$34,555 27
Food: —		
Butter, . . . . .	\$2,917 49	
Butterine, . . . . .	2 10	
Beans, . . . . .	304 54	
Bread and crackers, . . . . .	97 29	
Cereals, rice, meal, etc., . . . . .	213 25	
Cheese, . . . . .	81 76	
Eggs, . . . . .	1,206 22	
Flour, . . . . .	1,786 83	
Fish, . . . . .	953 14	
Fruit (dried and fresh), . . . . .	952 73	
		<hr/>
Amounts carried forward, . . . . .	\$8,515 35	\$34,555 27



<i>Amounts brought forward,</i>	\$8,515 35	\$34,555 27
<b>Food — <i>Con.</i></b>		
Lard,	87 76	
Meats,	4,684 96	
Milk,	565 51	
Molasses and syrup,	87 73	
Spices, seasonings, salt, etc.,	309 18	
Sugar,	1,180 38	
Tea, coffee, broma and cocoa,	289 20	
Vegetables,	937 88	
Yeast,	72 01	
Sundries,	40 68	
	<hr/>	16,770 64
<b>Clothing and materials: —</b>		
Boots, shoes and rubbers,	\$890 11	
Clothing,	1,012 99	
Dry goods for clothing and small wares,	503 82	
Furnishing goods,	53 92	
Hats and caps,	95 71	
Leather and shoe findings,	364 81	
Materials and machinery for manufacturing,	160 30	
	<hr/>	3,081 66
<b>Furnishings: —</b>		
Beds, bedding, table linen, etc.,	\$651 42	
Brushes, brooms,	221 76	
Carpets, rugs, etc.,	93 33	
Crockery, glassware, cutlery, etc.,	442 01	
Furniture and upholstery,	634 10	
Kitchen furnishings,	146 01	
Wooden ware, buckets, pails, etc.,	35 60	
Sundries,	32 91	
	<hr/>	2,257 14
<b>Heat, light and power: —</b>		
Coal,	\$6,026 41	
Freight on coal,	113 61	
Gas,	14 70	
Oil,	117 47	
	<hr/>	6,272 19
<b>Repairs and improvements: —</b>		
Brick,	\$20 81	
Cement, lime and plaster,	161 92	
Doors, sashes, etc.,	9 65	
Electrical work and supplies,	180 09	
Hardware,	308 95	
Lumber,	324 37	
Machines (detached),	74 16	
Paints, oil, glass, etc.,	549 09	
Plumbing, steam fitting and supplies,	575 67	
Roofing and materials,	17 49	
Sundries,	37 36	
	<hr/>	2,259 56
<i>Amount carried forward,</i>		\$65,196 46

Amount brought forward, . . . . .	\$65,196 46
Farm, stable and grounds: —	
Automobile repairs, . . . . .	\$211 20
Automobiles, gasoline, oil and tires, . . . . .	910 79
Blacksmith and supplies, . . . . .	117 10
Carriages, wagons, etc., and repairs, . . . . .	278 48
Fertilizers, vines, seeds, etc., . . . . .	738 01
Hay, grain, etc., . . . . .	3,900 40
Harnesses and repairs, . . . . .	28 73
Other live stock, . . . . .	6 00
Gasoline and oil for motor, . . . . .	6 03
Tools, farm machines, etc., . . . . .	195 95
Sundries, . . . . .	173 86
	<hr/>
	6,566 55
Religious services, . . . . .	1,555 00
Miscellaneous: —	
Books, periodicals, etc., . . . . .	\$123 30
Entertainments, . . . . .	193 59
Freight, expressage and transportation, . . . . .	573 52
Gratuities, . . . . .	10 00
Hose, etc., . . . . .	31 17
Ice, . . . . .	278 44
Medicines and hospital supplies, . . . . .	1,622 44
Medical attendance, nurses, etc. (extra), . . . . .	25 00
Postage, . . . . .	191 96
Printing and printing supplies, . . . . .	141 27
Printing annual report, . . . . .	81 07
Soap and laundry supplies, . . . . .	676 98
Stationery and office supplies, . . . . .	200 68
School books and school supplies, . . . . .	420 29
Travel and expenses (officials), . . . . .	159 58
Telephone and telegraph, . . . . .	372 09
Water, . . . . .	1,609 37
Sundries, . . . . .	36 72
	<hr/>
	6,747 47
Total expenses for maintenance, . . . . .	<hr/> \$80,065 48

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1914, . . . . .	\$10,460 83
Expended during the year (see statement annexed), . . . . .	\$9,880 16
Reverting to treasury of Commonwealth, . . . . .	90 36
	<hr/>
	9,970 52
Balance Nov. 30, 1915, . . . . .	<hr/> \$490 31

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$2,686 99	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$4,088 20	
Account of special appropriations, . . . . .	24 81	
	<hr/>	4,113 01
Due from treasury of Commonwealth account of November, 1915, schedule, . . . . .	2,862 19	
	<hr/>	\$9,662 19

*Liabilities.*

Schedule of November bills, . . . . .	\$9,662 19
---------------------------------------	------------

## PER CAPITA.

During the year the average number of inmates has been 262.18.  
 Total cost for maintenance, \$80,065.48.  
 Equal to a weekly per capita cost of \$5.872<sup>+</sup>.  
 Receipt from sales, \$214.64.  
 Equal to a weekly per capita of \$0.0157.  
 All other institution receipts, \$45,041.28  
 Equal to a weekly per capita of \$3.3037.

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Prisons and hospitals loan fund,	Acts 1904, chap. 446	\$300,000 00	\$2,754 50	\$299,999 81	\$0 19 <sup>1</sup>
Assembly hall,	Res. 1911, chap. 148	20,000 00	} 107 72	29,909 83	90 17 <sup>1</sup>
	Res. 1912, chap. 63	10,000 00			
Water supply,	Res. 1913, chap. 38	7,000 00	6,306 83	6,590 83	409 17
Cow barn,	Res. 1913, chap. 38	3,000 00	3 35	3,000 00	-
Cows and dairy equipment,	Res. 1914, chap. 76	2,700 00	707 76	2,618 86	81 14
		\$342,700 00	\$9,880 16	\$342,119 33	\$490 31

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*ALONZO B. COOK,  
*Auditor.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

## LAWS RELATING TO THE MASSACHUSETTS HOSPITAL SCHOOL.

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ACTS OF 1904, CHAPTER 446.

### AN ACT TO ESTABLISH THE MASSACHUSETTS SCHOOL AND HOME FOR CRIPPLED AND DEFORMED CHILDREN.

*Be it enacted, etc., as follows:*

SECTION 1. The governor, with the advice and consent of the council, shall appoint five persons who shall constitute the Board of Trustees of the Massachusetts School and Home for Crippled and Deformed Children, the purpose of which shall be the education and care of the crippled and deformed children of the commonwealth. The trustees shall hold office for terms of one, two, three, four and five years, respectively, beginning with the first Monday of December in the present year, and until their respective successors are appointed and qualified; and previous to the first Monday in December in each year thereafter the governor shall in like manner appoint one such trustee to hold office for the term of five years, beginning with the first Monday in December of the year of his appointment, and until his successor is appointed and qualified. Any such trustee may be removed by the governor, with the advice and consent of the council. Any vacancy occurring in said board shall be filled in like manner for the unexpired term.

SECTION 2. The lands held by said trustees in trust for the commonwealth for the use of said school and home, as hereinafter provided, shall not be taken for a street, highway or railroad without leave of the general court specially obtained.

SECTION 3. The trustees shall be a corporation for the same purposes for which the trustees of each of the state insane hospitals are made a corporation by section twenty-three of chapter eighty-seven of the Revised Laws, with all the powers necessary to carry said purposes into effect.

SECTION 4. The trustees shall select a site for the school and home; and shall have power to purchase land therefor, subject to the approval of the governor and council, and to erect on such

land suitable buildings to hold not less than three hundred children and the officers, employees and attendants, and to provide for the equipment and furnishing of said buildings: *provided, however,* that the expenditure for carrying out the purposes of this act shall not exceed three hundred thousand dollars. No expenditure shall be made for the erection of buildings except for plans therefor, until the plans have been approved by the governor and council, and no such approval shall be given unless the governor and council shall be satisfied that the cost of the real estate and the erection and completion of buildings and the equipment and furnishing of the same, so as to be ready for occupancy, will not exceed three hundred thousand dollars. The trustees shall have authority to make all contracts and employ all agents necessary to carry into effect the provisions of this act.

SECTION 5. The trustees shall have the same powers and shall be required to perform the same duties in the management and control of the said school and home, as are vested in, and required of, the trustees of the various state insane hospitals under chapter eighty-seven of the Revised Laws, so far as said chapter is applicable.

SECTION 6. When the buildings constructed under the provisions of this act are so far completed that in the opinion of the trustees they may properly be used for the purposes of the school and home, the trustees shall notify the governor, who shall thereupon issue his proclamation establishing the school and home.

SECTION 7. After the establishment of the school and home the trustees shall receive no compensation for their services, but they shall be reimbursed from the treasury of the commonwealth for all expenses actually incurred by them in the performance of their official duties.

SECTION 8. The trustees may appoint, and, subject to the approval of the governor and council, may fix the salaries of all persons necessary for the proper administration of the affairs of the school and home, and may incur all expenses necessary for the maintenance of the school and home.

SECTION 9. The charges for the support of the children of the school and home who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school and home. The board of such children as have a legal settlement in some city or town shall be paid by such city or town if such children are received at the school and home on the request of the overseers of



the poor of such city or town. The trustees may in their discretion receive other children who have no means to pay for tuition and board; and the tuition and board of all such children shall be paid from the treasury of the commonwealth.

SECTION 10. There shall be a thorough visitation of the school and home by two of the trustees thereof monthly, and by a majority of them quarterly, and by the whole board semi-annually, and after each visitation a written report of the state of the institution shall be drawn up, which shall be presented at the annual meeting to be held in December. At the annual meeting the trustees shall make a detailed report of their doings to the governor and council, and shall audit the report of the treasurer, which shall be presented at said annual meeting, and transmit it with their annual report to the governor and council.

SECTION 11. The accounts and books of the treasurer shall at all times be open to the inspection of the trustees.

SECTION 12. The state board of charity shall have general supervision of said school and home, and may, when so directed by the governor, assume and exercise the powers of the board of trustees of said school and home in any matter relating to the management thereof.

SECTION 13. For the purpose of meeting expenses incurred under the provisions of this act the treasurer and receiver general is hereby authorized, with the approval of the governor and council, to issue scrip or certificates of indebtedness to an amount not exceeding three hundred thousand dollars, for a term not exceeding twenty years. Such scrip or certificates of indebtedness shall be issued as registered bonds or with interest coupons attached, and shall bear interest at a rate not exceeding four per cent. per annum. They shall be designated on the face thereof as the Massachusetts School and Home for Crippled and Deformed Children Loan, shall be countersigned by the governor, and shall be deemed a pledge of the faith and credit of the commonwealth, and the principal and interest shall be paid at the times specified therein in gold coin of the United States or its equivalent; and such scrip or certificates shall be sold and disposed of at public auction, or in such other mode, and at such time and prices, and in such amounts, as the treasurer shall deem best. Such amounts shall be raised annually by taxation as will be sufficient, with the interest thereon, to pay the interest on the loan and the principal as it falls due.

SECTION 14. This act shall take effect upon its passage. [*Approved June 8, 1904.*]

## ACTS OF 1907, CHAPTER 226.

## AN ACT TO CHANGE THE NAME OF THE MASSACHUSETTS SCHOOL AND HOME FOR CRIPPLED AND DEFORMED CHILDREN TO THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. The name of the Massachusetts School and Home for Crippled and Deformed Children, established by chapter four hundred and forty-six of the acts of the year nineteen hundred and four, and located in the town of Canton, is hereby changed to the Massachusetts Hospital School.

SECTION 2. This act shall take effect upon its passage. [*Approved March 20, 1907.*]

## ACTS OF 1909, CHAPTER 497.

## AN ACT RELATIVE TO THE CARE OF CERTAIN CHILDREN AT THE MASSACHUSETTS HOSPITAL SCHOOL.

*Be it enacted, etc., as follows:*

SECTION 1. Chapter four hundred and forty-six of the acts of the year nineteen hundred and four is hereby amended by striking out section nine and inserting in place thereof the following: — *Section 9.* The trustees may, upon the written application of any child entitled to receive the benefit of said school, or upon such an application made by a parent, guardian, or person having the legal custody of the child, or by any state or municipal board or official having such custody, admit such child to said school, subject to such rules and regulations as the trustees may prescribe, and the trustees may at their discretion discharge such child from the school. The charges for the support of the children of the school who are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such children, such persons or such kindred at a rate to be determined by the trustees of the school. The board of such children as have a legal settlement in some city or town shall be paid by such city or town at a rate not exceeding four dollars a week, notice of the reception of the children by the trustees being given by them to the overseers of the poor of the city or town of settlement as soon as is practicable; and the tuition and board of those having no such settlement shall be paid by the commonwealth. The trustees may in their discretion receive other children who have no means to pay for tuition and support, and the tuition and board of all such children shall be paid from the treasury of the commonwealth. The

attorney-general and district attorneys shall upon request bring action to recover said charges in the name of the treasurer and receiver general. Such charges as are paid by the commonwealth, or by any city or town, shall not be deemed to have been paid as state or pauper aid, and no person shall be deemed to be a pauper in consequence of his inability to pay for the support of a child in said school. The admission of a child as aforesaid to the school shall be deemed a commitment of the child to the care and custody of the commonwealth, and the trustees, with the approval of the state board of charity, may in their discretion detain the child at said school during its school age, or for such longer period during its minority as in the opinion of the trustees will tend to promote the education and welfare of the child.

SECTION 2. This act shall take effect upon its passage. [*Approved June 15, 1909.*]

NINTH ANNUAL REPORT

OF

THE TRUSTEES

OF THE

MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),

AT CANTON,

FOR THE

YEAR ENDING NOVEMBER 30, 1916.



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# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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### TRUSTEES.

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LEONARD W. ROSS, <i>Secretary</i> ,	.	.	.	BOSTON.
ALFRED S. PINKERTON,	.	.	.	WORCESTER.
WILLIAM F. FITZGERALD,	.	.	.	BROOKLINE.
WALTER C. BAYLIES,	.	.	.	TAUNTON.

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### RESIDENT OFFICERS.

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ORA G. DANIELS, M.D.,	.	.	.	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.,	.	.	.	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	.	.	.	<i>Clerk.</i>
GERTRUDE V. EASTMAN,	.	.	.	<i>Nurse.</i>
RUTH PARK,	.	.	.	<i>Head Teacher.</i>
IDA C. LYMAN,	.	.	.	<i>Housekeeper.</i>
WILLIAM H. COFFIN,	.	.	.	<i>Engineer.</i>
JESS BLACK,	.	.	.	<i>Farmer.</i>

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### BOARD OF CONSULTANTS.

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AUGUSTUS THORNDIKE, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
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JAMES S. STONE, M.D.,	.	<i>Surgeon, Department of General Surgery.</i>



# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

The Massachusetts Hospital School was planned over ten years ago for the purpose of caring for and training such crippled children of normal intelligence and unimpaired senses as are deprived of proper education under their existing home conditions on account of their disabilities.

The trustees of the institution find much satisfaction in reporting the continued and increasing fulfillment of the idea embodied in the act of incorporation. The accompanying report of the superintendent indicates thoroughly the original design of the school carried out. Little additional statement is needed in the report of the Board of Trustees, but attention is here called to a few facts of general interest.

From this and preceding reports, it is seen that each year the school graduates a number of previously dependent or helpless individuals with a sufficient amount of training to enable them to become either self-supporting or capable of materially helping themselves by efficient work.

As evidence of the value to the community of the work of the school may be mentioned the results obtained in the management of a certain class of disabilities to which public attention has been especially called during the past year on account of the extensive epidemic of the disease popularly known as infantile paralysis.

Since its establishment the school has each year received a number of children seriously afflicted with the effects of this disease. The cases brought to the institution are usually of the more severe form of disability, who for some time before their admission to the Massachusetts Hospital School have been

entirely neglected, owing to the parents' inability to furnish them with either proper treatment or proper education. Many of these are illiterates and, in many instances, entirely helpless.

That the school has been able not only to give children of this class suitable education and training but to help them to a greater physical activity is a source of gratification, both to the parents and the children, and of service to the State. The child in a wheel chair is a prisoner. If such a child is able to go about actively even on crutches or with the aid of apparatus without crutches, he is in a position to become to a certain extent a worker rather than a dependent.

The citation of the records of a few of these cases may serve as a source of encouragement to the parents of others similarly afflicted. In many of these cases a part of the disabilities of these children is due to the fact that for many years their desire for activity is checked because of their handicap, and to the difficulty of activity compared with that of their companions. It has been found by associating children of this class with others that were similarly handicapped that cripples become less self-centered and self-pitying and stimulate such activity and muscle development as is possible.

The disease being one in which after the first onset there is a period of improvement for a time, and the cases brought to this institution being those who have passed this period, the problem of treatment consists in enabling the paralyzed children to make all possible use of muscles weakened by disuse.

As the school is furnished with the proper surgical equipment, deformities resulting from the paralytic attacks and the consequent muscular conditions are corrected, and suitable appliances, when needed, are furnished to aid in locomotion.

It has been gratifying to observe in how many instances improvement and substantial gain are established by the simple method of allowing the children to develop their weakened muscles under proper supervision and with proper mechanical aid by the natural process of activity expected of children placed under favorable conditions.

A few illustrative cases may be of interest.

K., a young boy twelve years of age, of Polish birth, was admitted to the school, afflicted with the paralytic deformities

following an attack of poliomyelitis ten years before. He was confined to the sitting position, his lower limbs were drawn up under him and his position resembled that of a Hindoo idol. The legs could be pulled partially straight, but the contracted tendons and skin prevented this except to a limited degree. The boy was virtually a helpless dependent. By proper measures carefully employed, the limbs were gradually straightened, and at present, with the use of crutches and light apparatus, the boy, now nineteen years of age, is an active pupil at his school and trade work, and takes part in the activities of the school, going about everywhere with the other pupils. He is able to be self-supporting as a cobbler.

The paralysis in this instance was confined to the lower extremities, but in another instance the paralysis was much more extensive.

*B.*, a pupil of the school for eight years. Previous to this he was bedridden or confined to a chair, with paralysis or impaired power in both arms, legs and back. Under appropriate treatment and the use of walking frame, apparatus and crutches, and the utilization of the natural activity of a boy stimulated by the example of his crippled fellows, a certain amount of strength was developed in the muscles weakened by prolonged disuse. He has gained the power of locomotion and has gone ahead freely, aided by the use of supports for his legs. He has regained a considerable degree of power in his arm, is able to use a fork and throw a ball. He is able to write, has graduated from the grammar grade and is now on a high school course. He has a bright intellect and will be able to utilize this as a breadwinner, aided by the education he has received.

*G.*, a boy twelve years old, was so severely stricken with poliomyelitis two years before entrance into the school that he not only was unable to walk but was confined to a bed or chair; and was so distorted in his figure, owing to the muscular weakness of his trunk muscles, that his left shoulder rested on his left hip. By appropriate treatment his figure was gradually straightened, and he is able to walk about freely, has graduated from the grammar grade, and walks a part of the time with the aid of simple apparatus. He is a successful cobbler and can be self-supporting. He is now seventeen years of age.



The Board of Trustees, in directing the admission of pupils to the Massachusetts Hospital School, organized for the education and care of crippled and deformed children, desire to interpret the terms in as liberal a manner as is possible without interfering with the definite purpose of the school, namely, the training of such children to self-support.

It is manifestly unwise to admit to the school cases with such impaired intelligence as incapacitates them for any mental training, or with impaired senses, or such children whose disabilities interfere with the proper work of the school; but the purpose of the school will be fulfilled if children are admitted who, on account of their disabilities, are unable to receive proper education while medical care is needed to restore them to a relative degree of health.

The educational demands upon the school have increased, with the added opportunities for industrial training, to such an extent that before long more adequate school buildings will be needed.

The organization of the institution is such as will permit a considerable expansion of its usefulness with a relatively small increase of expenditure.

It is to be borne in mind that the work of the Massachusetts Hospital School differs from that of other institutions caring for paralytic cases in many essential particulars. The school was not planned as a hospital for the care of patients in the earlier stage of the affection, and has not been equipped with facilities for massage or electrical treatment involving expense and duplicating the work of various hospitals; yet it is not to be considered a home in which no suitable treatment is undertaken. The institution is primarily a school for the best training of what may be termed the submerged abilities of the crippled.

By a combination of the helpful influences of a home, school and medical and surgical treatment, with the elimination as far as possible of the cramping influences of an institution by allowing the development of individual activity, results have been obtained of a grade of excellence surprising to the trustees of the institution.

An appropriation of \$13,000 was made last year for the

erection of one of two much-needed extensions to the administration building. The trustees decided to erect the west extension first, and the work is now nearing completion at a cost slightly within the appropriation available. The trustees are now prepared to undertake the erection of the second wing, which is practically an exact duplicate of the first, with the exception of the interior arrangement, which is designed to provide adequate dining-room accommodations for employees, a bakery which has become an important department for the training of certain crippled boys, and additional bedrooms for officials and employees. It is estimated that the east wing can be erected and both wings furnished and equipped at a cost of \$15,000, the appropriation of which the trustees earnestly recommend.

The growth and development of the school convince the trustees of the necessity for the purchase of land which was considered at the time of the establishment of the school. We therefore recommend and request the appropriation of \$15,000 for the purpose.

The additional items provided for the institution under the provisions of the Resolves of 1916, chapter 119, have been either completed or are now in process of completion, and all will be provided within the amount of money appropriated. Granolithic walks have been completed and are proving of excellent service. The extension of water mains, installation of fire hydrants, and the acquirement of hose and fire equipment have provided ample fire protection for all the buildings of the school, and have relieved the minds of those charged with the administration of the affairs of the school of much anxiety. Through the acquisition of an auto truck we have been enabled to haul our coal and other freight at a greatly reduced cost from former years. Where we paid 85 cents per ton for the haulage of coal, we have been able to reduce the cost through the use of the truck to about 40 cents per ton, and eliminate delays in delivery formerly existing to a troublesome degree. With the completion of the piggery, ice house, garage and poultry houses now under construction, we anticipate service of great value.

With the acquisition of additional land and its development,

we expect that the increased production of vegetable growths in the form of food supply to the inmates of the institution and to the dairy will materially reduce the cost of such supplies. The establishment of our dairy has amply demonstrated the wisdom of the investment, as we have been able to provide a safe and high quality of milk at a cost considerably less per unit than the local market price; at the same time raising nine of the best selected heifer calves, which policy will undoubtedly maintain an increased dairy herd by the development of mature animals raised under known healthful conditions and guaranteeing an abundant supply of milk, which forms an important article of food for the children under our care, without the necessity for the purchase in the open market of additional animals. Nor should the value of manure produced, resulting in increased fertility and productive capacity of our land, which is difficult to state in exact figures, be lost sight of.

The establishment of our independent water supply two years ago continues to demonstrate its value, as compared with the previous method of purchase of the town supply. The supply from the well continues to prove of sufficient volume and good quality for all uses except laundry and boiler supply, which is still purchased from the town through the maintained connection with its system; but the cost to the Commonwealth proves to be only a fraction of the previously purchased supply.

The organization of the Massachusetts Hospital School continues of the high standard established and maintained in previous years. For the most part the officers, teachers and nurses are continuing in the service, and with added experience have developed an increased efficiency in their several departments, and the trustees are pleased to thus publicly acknowledge and express their appreciation, not only for the service rendered, but for their loyalty and their enthusiastic interest in the work in which they are engaged.

The spirit of good will and mutual helpfulness existing throughout the entire organization, fostered and encouraged by our efficient superintendent, and willingly participated in by all, has produced results, and will, we believe, continue to produce

results that call for the admiration of all who come within its circle of influence.

We call attention to the annual report of the superintendent and treasurer, which is annexed hereto and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.

LEONARD W. ROSS.

ALFRED S. PINKERTON.

WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to present my ninth annual report of the operations of the Massachusetts Hospital School for the period from Dec. 1, 1915, to Nov. 30, 1916, inclusive.

Three hundred and thirty-two children have been under treatment, as compared to 315 for the preceding year, and 311 for 1914. There were at the beginning of the year 160 boys and 110 girls, or a total of 270, and 62 children, 32 boys and 30 girls, were admitted.

The maximum number at any one time was 277 on October 27, the minimum 198 on December 25, the daily average number for the year being 261.52. In considering the daily average number under treatment as compared to the number the school is equipped to accommodate, it should be borne in mind that children who are temporarily absent for various reasons are not included in the computation. Two hundred and twenty-four individual visits were recorded for the year, representing 2,891 days' absence, a factor which materially lowers the daily average, and causes a proportional increase in the per capita cost of maintenance.

### ADMISSIONS

for the year numbered 62, 6 more than the previous year. Nineteen, or 31— per cent., came as a consequence of infantile paralysis, 17, or 27+ per cent., were suffering from some form of surgical tuberculosis or deformities resulting from the disease, and the remainder, or 42— per cent., because of other forms of paralysis, rickets and malnutrition and deformities of congenital origin. Contrary to the popular impression that many of the children sent to the school are crippled by injuries or from accidental causes, none of those admitted during the year was so classified.

The average admission age was eight years and eight months, the oldest being seventeen years and the youngest five years.



## THE NATIVITY

of those admitted agrees substantially with that of previous years. Fifty-seven, or 92— per cent., were born in Massachusetts, 1, or 2— per cent., in other New England States, 2, or 3— per cent., in other parts of the United States, and 2, or 3— per cent., in foreign countries.

Their parentage likewise differs little from previous years. Exclusive of 4, or 6+ per cent., whose birthplaces were unknown, 16, or 26— per cent., of the mothers were born in Massachusetts, 7, or 11+ per cent., in other parts of the United States, and 35, or 57— per cent., in foreign countries. Exclusive of 7, or 11+ per cent., whose birthplaces were unknown, 18, or 29+ per cent., of the fathers were born in Massachusetts, 4, or 7— per cent., in other parts of the United States, and 33, or 53+ per cent., in foreign countries.

## THE DISCHARGED

cases show an encouraging number who leave to become self-supporting or to continue their education in the public schools. Of the 61 who left during the year, 10 had completed the prescribed course of study in the grades and were prepared for high school, which 4 intended to enter; 17 others had recovered or were so much improved that they were no longer in need of special care and training as cripples; 6 were discharged as mentally unpromising for further advancement in school, after having made much physical improvement under treatment not available to them elsewhere; 11 were taken against advice or when progressive decline seemed inevitable; 5 were out on visit at the close of the year; 4 were discharged much improved, to leave the State; and 8 children died.

## THE PURPOSE

of the school, as defined by the act creating it, "shall be the care and education of the crippled and deformed children of the Commonwealth." While the statute does not provide that crippled and deformed children who are also deaf, blind, feeble-minded, epileptic, or even those with criminal tendencies, shall not be admitted, it is clearly apparent that with splendidly



equipped institutions already established for the care of such children, it was not intended that they should be sent to the Hospital School.

### THE SCHOOL

has therefore been organized for children who, if not crippled or deformed, would be able to attend the public schools. In fact, the courses of study, especially for those who are temporarily crippled and therefore likely to some day be classed with normal children, have been arranged to conform as nearly as practicable to the public school standard. By the time those who are permanently crippled have reached the seventh or eighth grades, it is usually not difficult to determine in which particular line of occupation they are most likely to become self-supporting, and to direct them during the completion of their work in the grades and possibly for a few months following graduation into the most profitable vocation. The design of the institution, as a means to an end, can be explained in no better way than by the example of some of those who have left during the year. The following cases have been selected as fairly representative of others equally successful, and of the type the school is organized to relieve and assist:—

A strong healthy boy of bright promise suffered from an attack of infantile paralysis at the age of twelve years. The disease left him extensively paralyzed. He was confined to a wheel chair for about a year, and at time of admission some deformities had occurred, especially of the back. There was marked atrophy and loss of power in both legs and the muscles of the trunk. The large extensor muscles of the thigh, the adductors and those which flex the knees were completely paralyzed. The muscles of one hand and those of the opposite shoulder were also involved, but fortunately not enough to prevent the use of crutches, and by the aid of double steel splints attached to a stiff leather corset he learned to walk. By nature a cheerful and ambitious boy he never lost courage during many months of muscle training and other essential treatment requiring most patient and persistent effort. When he entered the grades, he was also assigned to the class in cobbling, where he became very skillful in the manufacture of moccasins, for which he found a ready sale in one of the leading

shoe stores of Boston. He realized the importance of learning how to do more than one kind of work, and when he gained an insight into bookkeeping in the eighth grade, naturally his mind turned at once to clerical work in the main office. He found time to learn something of typewriting and stenography and showed rare good judgment in receiving and distributing telephone calls. He was actively interested in the social life of the school as president of one of the boys' clubs and leader of the school band. To-day he is successfully employed as telephone operator at the private branch exchange of one of the large State hospitals. (No. 363.)

A fifteen-year-old girl suffered from a tuberculous invasion of the hip joint. It was at first thought necessary to care for her in her own home, but as she lived on a farm several miles from the family physician it was impossible to give her the constant attention her condition demanded. Symptoms progressively increased until the disease was far advanced and her condition reached a critical stage. After several unsuccessful attempts to get her into a general hospital, and as a last resort, she came here as a special case. There was found to be a very large and deep abscess formation about the hip joint, and the X-ray showed that some destruction of the bone had already taken place. Mechanical rest secured by the recumbent position upon a bed frame and carefully adjusted traction to correct the deformity and remove pressure from the affected bones gave almost immediate relief. The high temperature gradually subsided, opiates were withdrawn, and the patient was soon allowed to attend brief outdoor sessions of school, with the hip joint protected by a traction abduction splint. The large abscesses were drained and healed in about three months. She wore the ambulatory splint with high sole and crutches until new bone formation gave her a strong serviceable hip. The splint was gradually withdrawn as the muscles of the affected limb regained their normal tone, and the girl was discharged recovered.

During the three years she was under treatment, she acquired a practical knowledge of housekeeping at the domestic science cottage, became an enthusiastic member of the mandolin club, learned to repair and make her own clothing, and

completed the prescribed course of study in the grades which enabled her to enter high school when she returned to her home.

It is very gratifying to see this happy girl to-day without any form of support or apparatus and walking without perceptible lameness; but the case is deserving of mention, not especially to emphasize her splendid recovery, but to illustrate the opportunities for an education while convalescence and recovery are taking place. (No. 414.)

This most important feature of the school is still further shown by a fifteen-year-old boy who came in with tuberculosis of the knee joint of long standing. He also made a complete recovery and left with the school diploma, to become self-supporting, although at one time before admission his condition was so serious that amputation seemed inevitable. A few months preceding his graduation he became interested in baking, and was given a chance to do practical work under the direction of the institution baker. When he left the school he entered the employ of a large baking establishment in the vicinity of Boston, and is looking forward to the time when he and his mother, who is a cook, can carry on their trades together. (No. 31.)

Another graduate of the class of 1916, who was recently discharged to self-support as a licensed chauffeur, was admitted several years ago with chronic tuberculous disease of the knee joint. I happened to see the boy for the first time in a city almshouse some two years before the State had made any provision for the special care of such cases. He had then all the incipient symptoms of suppuration, and the prospect for the delicate unhealthy looking child was not good. He had been under observation in at least five different hospitals and institutions before he came to us and his health had been going from bad to worse. A long-continued period of rest to the leg as well as to the knee joint was secured by the use of leather and steel. He practically lived out-of-doors both day and night, and like most of our cases he attended school about one hour and a half each day. He is now perfectly well and in very active occupation. He can move his knee joint freely, there is no perceptible difference between his two legs, and it would be difficult for one who saw him a few years ago to conceive

it possible that he could acquire the growth and muscular development which has taken place. (No. 26.)

The next case, a boy of fifteen, represents more distinctly the type of cripple for which the school is popularly believed to be maintained, although experience teaches us to believe that most cases of bone tuberculosis when placed under the most favorable conditions in the early stages may be generally regarded as temporary cripples only, and that permanent disability from such causes will become increasingly less common.

The previous history of this boy indicates that he was in excessively bad health from the age of two; that repeated efforts to save his leg by surgical operations were unsuccessful, and that it was finally amputated at a point within about 4 inches of the hip joint. Having spent most of his life in decided ill health, and with a natural or an acquired dislike for study, he was sent to us for training which it was hoped would enable him to become a self-supporting citizen. It was first thought most essential to build up his general health. A happy care free life out-of-doors, regular hours of sleep and a nutritious diet produced a most extraordinary change. In fact, it soon became a more difficult problem to direct his accumulated energies into the proper channels for his future welfare. His stump was too short for the attachment of an artificial leg which would be of any assistance. Nevertheless he became so skillful in the use of his crutches that he appeared to have no difficulty in getting about as quickly and as easily as the average normal boy of his age. He became active in the various branches of athletics, such as roller and ice skating, football, baseball, vaulting, jumping and running, and the graceful precision with which he executed all his movements was admired by those who saw him at play. He was assigned to the tailoring class in addition to his regular school work, and after an apprenticeship of about a year he was discharged, to seek a position as a tailor's assistant, in which occupation he is now employed. (No. 418.)

Our present school accommodations are taxed to the limit. The manual arts and handicraft classes, which have been conducted on part-time schedule, must now be arranged for full time, to accommodate the increased number of pupils enrolled.



The sewing teacher must also devote every school day during the coming year to instruction which has heretofore been carried on alternately with the manual training for two days each week.

With increase in numbers we note an increase in school spirit and initiative. As more and more our graduates go out to work in higher schools or to become breadwinners, so the presence of these former pupils at holiday gatherings is an inspiration to those yet in the grades. All holidays have been appropriately observed.

The graduating class of this year took as their motto, "Each for all," and the exercises were planned to show the value of the individual to the State and to cultivate a higher sense of the duties of the citizen. After a number of patriotic readings, the exercises closed with a series of living pictures, showing the following vocations in which the graduates had been trained: cooking, sewing, dressmaking, basketry, office work, cobbling, running an automobile and playing in the band. All these were arranged by the graduates themselves, even the piano accompaniment being played by a member of the class. Twenty-one diplomas were awarded, the class being the largest in the history of the school.

Our library continues to be a popular feature of the school. It is usually crowded each afternoon, not only by those who go in to study, but also by many who withdraw books for outside reading. During the coming year it will be possible to furnish the room adjoining the library with pictures and books more exclusively suited to the needs of younger children.

One of the pleasantest events of the year was the school exhibit and reception for parents and friends. For this the afternoons of one week in June were set apart. A display of school work from all departments was arranged in the assembly hall. Grade papers, from the paper cutting of the subprimary to the bookkeeping of the eighth grade, were displayed upon racks in the center of the hall. Electric lamps, flower boxes, trays and other work in reed came from the basketry classes. A number of State flags were shown in another group. Each girl of the graduating class completed an outfit for herself, including a dress and underwear.

The sewing classes also contributed table linens, underwear,

embroidery and other forms of needlework. Tea was served to the visitors of the cottages in which the older girls and boys live. At each cottage the cooking classes showed bread, canned fruit and cakes of many varieties, tempting to the eye and gratifying to the taste.

Except for one stormy afternoon the weather was June at its best. Such a large number of friends gave us the pleasure of receiving them that we hope to make the enjoyable occasion an annual event.

Many of our pupils have relatives near, whom they often visit, and every week many parents come to see their children here; but at these times it is not possible to give a comprehensive view of the daily life of the pupil. The problem of bringing the parent and the school into a sympathetic understanding is best solved by presenting school methods and output for parental comment and consideration. We feel that such an exhibit is especially valuable for our more handicapped pupils, whose lives are necessarily more restricted. It was pleasant to see our wheel-chair cases beaming with pride as they escorted guests to see some well-planned piece of handicraft and afterwards entertained them at tea. We feel that the net result to all is an increase of school spirit, an awakening of enthusiasm, and a broadening of the outlook toward our aim and end, the fitting of our boys and girls for busy and useful lives.

#### THE ALUMNI

are taking a keen interest in the welfare of the school, as shown by the letters which they write and the return visits which many of them make throughout the year. At the last graduation exercises a large number were present, each wearing the respective class colors and pins.

An alumni association was formed by the election of officers, and arrangements are now being made for an annual reunion to be held at the school in June.

#### THE MEDICAL

care and supervision of a large number of children all physically disabled, many of them emaciated by disease and helpless in the extreme degree, involve a great amount of routine work



which requires unusual skill and patience upon the part of both physicians and nurses.

The application and adjustment of splints and apparatus to be made day after day will be appreciated as an item of importance when it is considered that there were in use at the close of the year 59 caliper splints, 38 abduction hip splints, 26 plaster jackets, 11 leather and plaster supports, 14 Thomas knee splints, 43 high soles, and 82 crutches.

Fortunately there has been no general epidemic from the contagious diseases which appeared from time to time during the year. In January a girl was returned from a visit to her home in which other children were sick with measles. We did not learn of her exposure, which the parents endeavored to conceal, until she developed the disease which was contracted by 24 others.

There was one case of diphtheria in April, and a few mild cases of mumps and chicken pox in March and May.

Some anxiety was caused by the appearance of a case of typhoid fever early in September. The patient was a carpenter temporarily employed to work upon the new buildings. Feeling reasonably certain of the independent milk and water supply, and having previously ascertained that there were no carriers of typhoid among the food handlers at the institution, attention was first directed to some outside source. The first appearance of symptoms following the patient's visit to Lynn, where several cases of typhoid had been reported, the usual period of incubation intervening, pointed quite conclusively to the source of the infection. Strict quarantine precautions were observed, and though he had a severe and somewhat protracted illness no other cases developed.

Typhoid vaccination, though not made compulsory, was performed upon 22 employees, who showed favorable reaction with the exception of 1 nurse, who developed an illness from which she did not fully convalesce for several weeks.

During the year a child with spastic paralysis and two employees, one a man of fifty-nine years, suffered from sharp attacks of pneumonia, all making good recoveries.

There have been few vacant beds at the infirmary, a daily average of about 25 surgical and medical cases being under treatment.

It is worthy of note that we now record the first case of appendicitis to be observed since the institution was established.

In the 8 cases who died, death was due to the following causes: Tuberculous disease of hip and spine with abscesses and amyloid degeneration; malignant endocarditis with embolism and meningitis, acute articular rheumatism and endocarditis; progressive muscular dystrophy; general tuberculosis with amyloid disease of liver, tuberculous multiple joint disease; organic disease of heart and tuberculous disease of spine; cyclic vomiting with acidosis and extensive anterior poliomyelitis; tuberculous disease of hip and spine with amyloid degeneration; chronic organic valvular heart disease with tuberculous disease of spine.

Complete physical examinations have been made as heretofore in all cases admitted, and as an aid to diagnosis as well as for purposes of record 155 X-rays have been taken during the year. For nine weeks during the summer one of the house officers of the orthopedic staff of the Boston Children's Hospital made a systematic study of all our cases of hip joint disease, and served as research medical assistant without compensation.

Many visits have been received from physicians and nurses who were especially interested in observing the terminal results of infantile paralysis, and the resident physicians have presented cases and explained important features of their special work to teachers' clubs, classes of social workers, district nursing associations and others engaged in educational and charitable matters who have sought information. In this way an effort has been made to meet the obligations of a public charitable institution and the more practical needs of those who have to form an opinion concerning the cause, the course, the probable termination and the proper treatment of the particular diseases which have to be dealt with at the school.

#### THE CONSULTING SURGEONS

have come sometimes at great personal inconvenience to render assistance whenever needed in special surgical emergencies, and at various other times to give advice in the treatment of inoperable cases whenever their expert opinion has been needed.

Very many parents, failing to observe the benefits which they

anticipated in one place, have taken their children to others, no treatment having been consistently followed, until, finally discouraged and without confidence in any method, they have brought the unfortunate ones here. The need for the exercise of discriminating judgment in such cases has been clearly recognized. In fact, the demands upon the expert specialists have grown to such an extent that it has been thought best to increase the number of consultants by the addition of two others, who have kindly consented to render what service they can to the school.

### THE DENTIST

has examined all newly admitted cases, and his records show that 323 operations were performed upon 130 individuals as follows: amalgam fillings, 36; cement fillings, 76; gutta percha fillings, 6; root fillings, 16; pulp renewals, 22; extractions, 67; cleanings, 80; and euginol-zinc oxide fillings, 20.

It is becoming a well-recognized fact, even among the laity, that the teeth if unclean or decayed offer a most favorable field for the growth of bacteria which are detrimental to good health. It can readily be seen that if children, especially those already suffering from the effects of bacterial invasion, are to maintain the high standard of physical health necessary to overcome existing disease, they must not have superimposed a foul mouth or bad teeth with the added toxins and faulty digestion.

The preventive measures necessary are careful examination and treatment by a competent dentist and the intelligent use of the tooth brush.

Once a week the dentist examines and treats any new patients admitted and other cases sent to him by the physicians in charge.

Each patient is given a liberal supply of a simple cleansing tooth powder, and is taught by the nurse in charge to properly use the tooth brush.

### IMPROVEMENTS

which were made possible by the timely appropriation of \$13,000 for the west wing extension to the administration building, \$11,250 for other improvements and equipment, and

\$900 for the water main and fire equipment, have been carried on as rapidly as possible under the unusual labor and market conditions which have prevailed during the past year.

By the purchase of a 2½-ton motor truck, equipped with a special steel body for hauling coal and another body for general use, a material saving of both time and money has been made in the transportation of coal and other freight.

One of our own graduates has operated the truck, and with the help of two, and occasionally three laborers hauled an average of 3 tons of coal per hour, or 24 tons per day, from Canton Junction, a distance of 2½ miles from our coal yard, at a maximum cost of about half the sum previously paid.

The regular employees, with some assistance from non-resident workmen, have erected a garage of substantial construction in cement and brick. The building, 25 by 40 feet, stands just north of the stable and has space for six cars and a truck. The floor and walls to the height of 3 feet are built of cement, the upper walls of brick, and the roof of tar and gravel, making a plain but serviceable structure, upon which the cost of maintenance should be very low for many years to come. The work is now practically completed, at a cost, including the installation of pipes for steam from the main supply, electric lights and water connections, well within the estimate of \$2,000.

A set of heavy platform scales of 20 tons' capacity has also been placed upon foundation walls of cement, at a point most convenient for the teams of freight and farm produce, directly east of the milk house and parallel to the road leading to the main barn.

The 6-inch water main has been extended from the east end of the administration building under the pergola and through the east dormitory basement to the walk leading to the domestic science cottage, thence almost due west to the knoll midway between the boys' cottage and the west dormitory. High pressure hydrants have been placed at the angle thus formed and the terminus, and 200 feet of fire hose purchased for what would appear to be adequate protection in case of fire.

A piggery is now being built with the thoroughness which characterizes the work of our own mechanics. It is to be 106



feet long, including a large central room for the preparation of food and slaughtering. The design, a modification of a piggery which has been found of practical value to another State institution, has been made without the services of an architect. The floors, walls and partitions are of cement, and the monitor roof of wooden construction.

The site, about 150 feet south from the cow barn, was chosen as the one not likely to be found desirable for future buildings on account of the filtration beds which the topographical survey of our land forced us to place in a most attractive situation overlooking the lake.

The west wing to the administration building, which was to have been completed before November 30, has been delayed on account of the difficulty in securing labor and materials, and the contractor has asked for an extension of time which will carry the work well into the new year.

New granolithic walks have been laid in a most satisfactory manner from Randolph Street to the administration building; from the pergola entrance to the main dining room to the boys' cottage, and from the latter building to the infirmary. Granolithic work of a similar character has also been done across a part of the front of the administration building, to serve the double purpose of protecting the basement storeroom from moisture, and providing an outdoor recreation place to serve as a piazza in front of the officers' and employees' dining rooms.

Aside from the numerous minor repairs which are not of sufficient importance to be mentioned in detail, the wooden piazza in front of the west end of the east dormitory has been replaced by concrete with a granolithic surface; the boys' cottage and the north sides of the east and west dormitories have been given a new coat of paint. Fifteen bedrooms, 4 schoolrooms and 2 play rooms have been refinished, and the painter has also found time to keep the floors and furniture throughout the institution in a good state of repair.

The apparatus shop in charge of the engineer has turned out 270 splints sent there to be repaired, and new work to the amount of 132 caliper plates, 18 foot plates, 28 caliper splints, 10 Thomas knee splints, and 9 Bradford abduction hip splints has been done.

The sewing room has to its credit a greater amount of repair work than that of previous years, owing to the increased number of children, and the following new work has been done: 118 dresses, 86 pairs bloomers, 21 dozen sheets, 9 pairs curtains, 294 nightgowns, 28 tablecloths, 3 dozen bureau scarfs, 12 dozen napkins, 54 aprons, 98 face towels, 8 dozen roller towels, 6 laundry bags,  $36\frac{1}{2}$  dozen pillow slips, 8 State flags, 6 brace aprons, 75 dish towels, 4 dozen tray cloths, 37 girls' coats, 164 E. Z. waists,  $13\frac{1}{2}$  dozen bibs,  $1\frac{1}{2}$  dozen dairy caps, 19 princess slips, 4 chair straps, 6 petticoats, 33 pairs drawers, 5 corset covers, 14 embroidered doilies, 5 dozen sheets and 1 awning.

The work upon the land has been interrupted by the frequent demands upon the men and teams in connection with the appropriation for special purposes. Some difficulty has also been experienced in securing competent farm help. Nevertheless the record shows results which compare very favorably with those of other years, as follows: 100 tons of ensilage, 450 bushels potatoes, 14 bunches asparagus, 619 pounds shell beans,  $6\frac{1}{2}$  bushels string beans,  $36\frac{1}{2}$  bushels mangels, 8,105 pounds cabbages, 2,053 pounds carrots, 8 bushels cauliflower,  $128\frac{1}{2}$  bushels corn, 1,712 pounds cucumbers, 206 heads of lettuce, 679 pounds parsnips,  $647\frac{1}{2}$  pounds unshelled green peas, 1 bushel green peppers, 1,359 pounds pumpkins, 5 bushels radishes, 560 pounds rhubarb, 1,390 pounds summer squash,  $48\frac{1}{2}$  bushels tomatoes, 100 pounds kidney beans and 100 pounds mixed beans. The analysis of home products also shows 5,445 $\frac{1}{2}$  pounds of pork, 80 $\frac{1}{2}$  dozen eggs and 52,198.5 quarts of milk. The milk was produced at an average cost of \$0.0507 per quart.

It now seems probable that the pasture which has been rented for dry cows and young stock will not be available to us next season, in which case another reason for the purchase of additional land should be added to those previously maintained in your recommendations for an appropriation to increase our present limited acreage.

I would also recommend that the Legislature be requested to provide ways and means for the erection of the east wing to the administration building, and the furnishings and equipment necessary for both the east and the west wings at an estimated cost of \$15,000.



There has been an unusual number of changes by employees in the subordinate positions on account of the opportunities they have had to secure higher wages elsewhere. The vacancies thus made in practically all divisions have caused an increased amount of work to fall upon those who remained, and especially the heads of departments, to whom great credit is due for most loyal assistance.

Mrs. Lillian S. Swimm resigned her position as housekeeper on May 22, to accept a similar appointment in another hospital. We were fortunate in being able to arrange for the transfer of Miss Ida C. Lyman from the domestic science cottage to succeed one who had rendered efficient service here for many years.

Miss Ethel A. Baker left after the successful completion of one year as teacher in the intermediate grades, and Miss Edith C. Wilde, a graduate of the Bridgewater Normal School, was appointed in her place.

In closing, I wish to acknowledge in grateful appreciation the countless ways in which the encouraging advice and support of the trustees have contributed to the harmonious completion of the year's work.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*

## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations on the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Acute congestive epiphysitis of hip, . . . . .	1	—	1
Congenital club feet, . . . . .	1	—	1
Congenital deformity of legs and arms, . . . . .	1	—	1
Congenital dislocation of hip, . . . . .	—	1	1
Hydrocephalus, . . . . .	—	1	1
Malnutrition and scoliosis, . . . . .	—	1	1
Multiple osteomyelitis, . . . . .	1	—	1
Paralysis, infantile, . . . . .	10	9	19
Paralysis, spastic, . . . . .	2	3	5
Progressive muscular dystrophy, . . . . .	1	—	1
Progressive torsion spasm, . . . . .	—	1	1
Rachitic deformity, . . . . .	2	2	4
Round shoulders and flat feet, . . . . .	—	1	1
Round shoulders and loose os calcis, . . . . .	—	1	1
Scoliosis, . . . . .	1	2	3
Spina bifida, . . . . .	1	—	1
Tuberculous disease of elbow, . . . . .	—	1	1
Tuberculous disease of hip, . . . . .	7	4	11
Tuberculous disease of spine, . . . . .	3	2	5
Tuberculous disease of spine and scoliosis, . . . . .	1	—	1
Undiagnosed, . . . . .	—	1	1
Totals, . . . . .	32	30	62

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	57	18	16
Other New England States, . . . . .	1	4	4
Other States, . . . . .	2	—	3
Total native, . . . . .	60	22	23
Other countries:—			
Austria, . . . . .	—	—	2
Canada, . . . . .	1	4	5
England, . . . . .	—	2	1
Hungary, . . . . .	—	1	—
Ireland, . . . . .	—	8	10
Italy, . . . . .	—	6	6
Russia, . . . . .	1	9	9
Scotland, . . . . .	—	1	—
Switzerland, . . . . .	—	2	2
Total foreign, . . . . .	62	55	58
Unknown, . . . . .	—	7	4
Totals, . . . . .	62	62	62

## VALUATION.

Nov. 30, 1916.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building, two dormitories and power house, . . . . .	147,184 08
Equipment for heat, light and power, . . . . .	6,883 47
Infirmmary, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn, . . . . .	3,000 00
Two isolation houses, . . . . .	501 00
Isolation barn and henhouse, . . . . .	280 00
Four portable hog cots, . . . . .	200 00
Shop, . . . . .	150 00
Granolithic walks, . . . . .	3,372 92
Water system, . . . . .	7,888 36
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	136 86
Milk house, . . . . .	761 38
Garage, . . . . .	4,822 39
Piggery, . . . . .	1,334 59
Fairbanks scales, . . . . .	745 31
	<hr/>
	\$299,679 87

## PERSONAL PROPERTY.

Travel, transportation and office expenses, . . . . .	\$4,790 81
Food, . . . . .	3,826 32
Clothing and materials, . . . . .	5,424 25
Furnishings and household supplies, . . . . .	28,744 03
Medical and general care, . . . . .	5,408 67
Heat, light and power, . . . . .	4,155 63
Farm and stable, . . . . .	9,676 22
Grounds, . . . . .	10 50
Repairs, ordinary, . . . . .	4,731 26
	<hr/>
	\$66,767 69

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1916:—

CASH ACCOUNT.			
Balance Dec. 1, 1915,	.	.	\$2,686 99
<i>Receipts.</i>			
<i>Institution Receipts.</i>			
Board of inmates:—			
Private,	.	\$890 39	
Cities and towns,	.	31,799 41	
Reimbursements, charitable			
(State minor wards),	.	9,962 86	
		<hr/>	\$42,652 66
Sales:—			
Food,	.	\$2 60	
Clothing and materials,	.	37 91	
Furnishings and household supplies,	.	1 35	
Medical and general care,	.	1 44	
Farm and stable:—			
Cows and calves,	\$40 00		
Hides,	3 57		
Sundries,	11 38		
		<hr/>	54 95
Repairs, ordinary,	.	6 25	
		<hr/>	104 50
Miscellaneous receipts:—			
Interest on bank balances,	.	\$88 44	
Sundries,	.	237 61	
		<hr/>	326 05
			<hr/>
			43,083 21
<i>Receipts from Treasury of Commonwealth.</i>			
Maintenance appropriations:—			
Balance of 1915,	.	\$2,862 19	
Advance money (amount on hand November 30),		6,800 00	
Approved schedules of 1916,	.	71,716 57	
		<hr/>	81,378 76
Special appropriations,	.		14,466 39
			<hr/>
Total,	.		\$141,615 35

*Payments.*

To treasury of Commonwealth, institution receipts, . . . .		\$43,083 21	
Maintenance appropriations:—			
Balance November schedule, 1915, . . . .	\$5,573 99		
Eleven months' schedules, 1916, . . . .	71,716 57		
November advances, . . . . .	3,352 09		
			80,642 65
Special appropriations:—			
Approved schedules, . . . .	\$14,466 39		
Less advances, last year's report, . . . .	24 81		
		\$14,441 58	
November advances, . . . . .		188 85	
			14,630 43
Balance Nov. 30, 1916:—			
In bank, . . . . .	\$3,196 04		
In office, . . . . .	63 02		
			3,259 06
Total, . . . . .			\$141,615 35

## MAINTENANCE.

Appropriation, current year, . . . . .	\$83,651 00
Expenses (as analyzed below), . . . . .	82,021 63
Balance reverting to Treasury of Commonwealth, . . . .	\$1,629 37

*Analysis of Expenses.*

Salaries, wages:—		
John E. Fish, M.D., superintendent, . . . .	\$3,500 00	
General administration, . . . . .	14,334 54	
Medical service, . . . . .	1,915 37	
Ward service (male), . . . . .	2,683 23	
Ward service (female), . . . . .	10,357 19	
Repairs, . . . . .	1,886 98	
Farm and stable, . . . . .	2,005 86	
Grounds, . . . . .	123 38	
		\$36,806 55
Religious instruction:—		
Catholic, . . . . .	\$520 00	
Jewish, . . . . .	500 00	
Protestant, . . . . .	520 00	
		1,540 00
Travel, transportation and office expenses:—		
Advertising, . . . . .	\$0 75	
Automobiles, . . . . .	1,125 00	
Automobile repairs and supplies, . . . . .	786 25	
Postage, . . . . .	188 35	
Amounts carried forward, . . . . .	\$2,100 35	\$38,346 55



<i>Amounts brought forward,</i>	\$2,100 35	\$38,346 55
<b>Travel, transportation and office expenses — <i>Con.</i></b>		
Printing and binding,	135 53	
Printing annual report,	121 88	
Stationery and office supplies,	237 47	
Telephone and telegraph,	380 40	
Travel,	126 93	
Freight,	17 90	
		3,120 46
<b>Food:—</b>		
Butter,	\$2,507 80	
Butterine,	180 00	
Beans,	295 64	
Bread, crackers, etc.,	102 84	
Cereals, rice, meal, etc.,	238 39	
Cheese,	95 27	
Eggs,	1,320 06	
Flour,	848 81	
Fish (fresh, cured and canned),	823 00	
Fruit (fresh),	535 16	
Fruit (dried and preserved),	426 84	
Lard and substitutes,	243 32	
Macaroni and spaghetti,	50 77	
Meats,	5,263 13	
Milk (fresh and substitutes),	184 86	
Molasses and syrups,	77 44	
Peanut butter, pie filling, etc.,	51 34	
Potatoes,	1,975 18	
Seasonings and condiments,	182 26	
Sugar,	1,380 64	
Tea, coffee, cocoa, etc.,	266 41	
Vegetables (fresh),	469 31	
Vegetables (canned and dried),	109 40	
Yeast, baking powder, etc.,	79 57	
Sundries,	36 62	
Freight,	281 06	
		18,025 12
<b>Clothing and materials:—</b>		
Boots, shoes and rubbers,	\$1,119 32	
Clothing (outer),	973 99	
Clothing (under),	386 42	
Dry goods for clothing,	244 08	
Hats and caps,	44	
Leather and shoe findings,	325 13	
Machinery for manufacturing,	67	
Socks and smallwares,	178 92	
Freight,	13 88	
		3,242 85
<b>Furnishings and household supplies:—</b>		
Beds, bedding, etc.,	\$663 54	
Carpets, rugs, etc.,	105 01	
<i>Amounts carried forward,</i>	\$768 55	\$62,734 98

<i>Amounts brought forward,</i>	\$768 55	\$62,734 98
<b>Furnishings and household supplies — <i>Con.</i></b>		
Crockery, glassware, cutlery, etc.,	260 77	
Dry goods and smallwares,	59 17	
Furniture, upholstery, etc.,	117 35	
Kitchen and household wares,	500 32	
Laundry supplies and materials,	637 66	
Lavatory supplies and disinfectants,	52 48	
Machinery for manufacturing,	2 25	
Table linen, paper napkins, towels, etc.,	309 60	
Freight,	43 93	
	<hr/>	2,752 08
<b>Medical and general care:—</b>		
Books, periodicals, etc.,	\$91 07	
Entertainments, games, etc.,	258 65	
Funeral expenses,	15 00	
Gratuities,	15 15	
Ice and refrigeration,	311 77	
Laboratory supplies and apparatus,	73 88	
Medicines (supplies and apparatus),	1,277 16	
Medical attendance (extra),	66 75	
School books and supplies,	196 30	
Water,	192 60	
Sundries,	26 89	
Freight,	40 29	
	<hr/>	2,565 51
<b>Heat, light and power:—</b>		
Coal,	\$6,220 89	
Freight on coal and other expenses,	390 04	
Gas,	14 25	
Oil,	43 58	
Freight,	3 74	
	<hr/>	6,672 50
<b>Farm and stable:—</b>		
Bedding materials,	\$169 54	
Blacksmithing and supplies,	144 00	
Carriages, wagons and repairs,	69 75	
Dairy equipment and supplies,	28 41	
Fencing materials,	19 54	
Fertilizers,	537 40	
Grain, etc.,	1,504 48	
Hay,	1,362 10	
Harnesses and repairs,	21 85	
Cows,	410 00	
Labor (not on pay roll),	310 32	
Rent,	71 00	
Spraying materials,	59 40	
Stable and barn supplies,	27 95	
Tools, implements, machines, etc.,	176 63	
	<hr/>	
<i>Amounts carried forward,</i>	\$4,912 37	\$74,725 07

<i>Amounts brought forward,</i>		\$4,912 37	\$74,725 07
Farm and stable — <i>Con.</i>			
Trees, vines, seeds, etc.,		193 77	
Veterinary services, supplies, etc.,		29 00	
Sundries,		20 43	
Freight,		19 66	
			5,175 23
Grounds: —			
Fertilizers,		\$101 80	
Labor (not on pay roll),		4 50	
Tools, implements, machines, etc.,		39 98	
Trees, vines, shrubs, seeds, etc.,		19 30	
Sundries,		1 35	
Freight,		2 25	
			169 18
Repairs, ordinary: —			
Brick,		\$2 80	
Cement, lime, crushed stone, etc.,		71 33	
Electrical work and supplies,		73 71	
Hardware, iron, steel, etc.,		227 41	
Labor (not on pay roll),		367 86	
Lumber, etc. (including finished products),		154 42	
Paint, oil, glass, etc.,		651 03	
Plumbing and supplies,		139 46	
Roofing and materials,		12 20	
Steam fittings and supplies,		44 80	
Tools, machines, etc.,		15 84	
Boilers, repairs,		124 79	
Sundries,		7 20	
Freight,		54 41	
			1,947 26
Repairs and renewals, roofing,			4 89
Total expenses for maintenance,			\$82,021 63

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1915,		\$490 31
Appropriations for fiscal year,		25,150 00
Total,		\$25,640 31
Expended during the year (see statement annexed),	\$14,466 39	
Reverting to treasury of Commonwealth,	71	
		14,467 10
Balance Nov. 30, 1916,		\$11,173 21

RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$3,259 06	
November cash vouchers (paid from advance money): —		
Account of maintenance, . . . . .	\$3,352 09	
Account of special appropriations, . . . . .	188 85	
	<hr/>	3,540 94
Due from treasury of Commonwealth from available appropriation account November, 1916, schedule, . . . . .	3,505 06	
	<hr/>	\$10,305 06

*Liabilities.*

Schedule of November bills, . . . . .	\$10,305 06
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PER CAPITA.

During the year the average number of inmates has been 261.52.  
Total cost for maintenance, \$82,021.63.  
Equal to a weekly per capita cost of \$6.031 +.  
Receipt from sales, \$104.50.  
Equal to a weekly per capita of \$0.0076.  
All other institution receipts, \$42,978.71.  
Equal to a weekly per capita of \$3.1604.

*Special Appropriations.*

Объект.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Water supply, . . . . .	Res. 1913, chap. 38	\$7,000 00	\$147 25	\$6,738 08	\$261 92
Cows and dairy equipment, . . . . .	Res. 1914, chap. 76	2,700 00	80 43	2,699 29	71 <sup>1</sup>
Wing to administration building, . . . . .	Res. 1916, chap. 119	13,000 00	5,708 40	5,708 40	7,291 60
Improvements and equipment, . . . . .	Res. 1916, chap. 119	11,250 00	7,905 15	7,905 15	3,344 85
Water main and fire equipment, . . . . .	Res. 1916, chap. 119	900 00	625 16	625 16	274 84
		\$34,850 00	\$14,466 39	\$23,676 08	\$11,173 21

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

JOHN E. FISH,

*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK,

*Auditor.*







TENTH ANNUAL REPORT

OF

THE TRUSTEES

OF THE

MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH),

AT CANTON,

FOR THE

YEAR ENDING NOVEMBER 30, 1917.



BOSTON:

WRIGHT & POTTER PRINTING CO., STATE PRINTERS,  
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1918.

PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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### TRUSTEES.

EDWARD H. BRADFORD, M.D., <i>Chairman</i> ,	.	.	.	.	BOSTON.
LEONARD W. ROSS, <i>Secretary</i> ,	.	.	.	.	BOSTON.
ALFRED S. PINKERTON,	.	.	.	.	WORCESTER.
WILLIAM F. FITZGERALD,	.	.	.	.	BROOKLINE.
WALTER C. BAYLIES,	.	.	.	.	TAUNTON.

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### RESIDENT OFFICERS.

JOHN E. FISH, M.D.,	.	.	.	.	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.,	.	.	.	.	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.,	.	.	.	.	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	.	.	.	.	<i>Clerk.</i>
GERTRUDE V. EASTMAN,	.	.	.	.	<i>Head Nurse.</i>
LILLIAN S. SWIMM,	.	.	.	.	<i>Housekeeper.</i>
WILLIAM H. COFFIN,	.	.	.	.	<i>Engineer.</i>
JESS BLACK,	.	.	.	.	<i>Farmer.</i>

---

### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
ROBERT SOUTTER, M.D.,	.	<i>Surgeon, Department of Orthopedic Surgery.</i>
JOHN LOVETT MORSE, M.D.,	.	<i>Physician, Department of Diseases of Children.</i>
JAMES S. STONE, M.D.,	.	<i>Surgeon, Department of General Surgery.</i>





# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

It is with much pleasure that the trustees of the Massachusetts Hospital School present their tenth annual report.

The excellent results already obtained and likely to continue may well be a source of satisfaction to the executive officers, the legislative body and the citizens of the Commonwealth.

The report shows that the industrial training of crippled children has been successfully carried on in connection with their general education to such a degree that not only have they been given the proper care needed for the treatment of their respective disabilities, but they have also received the education of normal children and the special training which has enabled them to become self-respecting and self-supporting citizens.

The fact that a homeless and crippled boy suffering from a tuberculous disease of the knee in a well-advanced stage, after several years' treatment and education at the Hospital School, should be so far restored to health that his physical condition was regarded as normal by the examining surgeons, and that he is now serving in the ranks of the regular army as a volunteer, is sufficient indication that the purpose of the work undertaken a decade ago in this Commonwealth was a desirable one and that the plans have been successfully realized.

In the majority of cases, however, the disabilities are of a character that prevent complete restoration to normal activity. The problem is more difficult in such cases and demands special training.

The present war has called out much consideration of the subject of rehabilitation of the maimed and crippled. For this

reason the admirable results obtained in this State from the organized effort towards industrial training of crippled children is now of special interest.

The problems presented for training maimed children differ in detail but not in purpose from those to be met in disabled soldiers. In certain respects the guidance of crippled children into a life of active usefulness is the more difficult one, for the reason that children need to develop the desire for work and the willingness to undertake responsibility, as well as to be trained to working ability.

The original purpose of the State was not simply to house, furnish surgical care, teach and give industrial training to children maimed by accident or disease unable to secure proper education and care, but also to fit them for self-support and aid them in securing breadwinning occupations. To what extent this has been done can best be shown by a statement of facts giving a brief record of some of the graduates of the school.

When a very small child infantile paralysis left one boy almost completely paralyzed below his waist. He received no treatment for a number of years, and the deformities which occurred were most distressing. Bedridden on admission, he is now able to walk with mechanical aid, and is actively managing a boot and shoe repairing shop, of which he is proprietor, employing additional labor.

Another boy, who lost both his legs, developed an ambition to become an engineer soon after his admission to the school. While he was going through the seventh and eighth grades, he also served an apprenticeship with the engineer at the heat, light and power plant. After a few months the district police found him qualified as a first-class fireman, and gave him a license to operate boilers. For the past three years he has had charge of the heating plant at a private institution near Boston.

Still another graduate of the school suffered from a severe attack of infantile paralysis in early life which left him permanently paralyzed in both legs and back. Extensive deformities in his back and legs developed to such an extent that he was quite helpless and bedridden upon admission. The deformities were corrected, and as a result of the training given

at the school he has become a skillful worker in leather, mocasin making and cobbling in which he is now self-supporting, and those who know him have no doubt as to his ability to take care of himself in the future.

One boy, deprived of the use of both forearms and hands, owing to the advantages obtained at the Hospital School, has become a reliable telephone operator.

Another illustrative case is that of a boy who was left with a badly deformed knee, which followed an extensive tuberculous invasion of the joint. During his residence at the school his health was restored, and a surgical operation successfully performed to relieve his deformity. One leg is much shorter than the other and he has no motion at the knee joint, but he is licensed to operate a heavy motor truck, an occupation in which he is especially efficient and at which he is regularly employed.

Still another case can be mentioned, that of a young man who was graduated from the school in 1912. On entrance, he walked with great difficulty and was developing a distortion of the spine. His disabilities were relieved by proper treatment. He received his education and since graduation has become an active office manager in a large business corporation.

This short review indicates the work already accomplished in the ten years' activity of the school.

There have been 87 graduates and, according to the reports received, they are with comparatively few exceptions either supporting themselves or contributing substantially to their support.

In addition to those who have remained in the institution during the whole of the educational course, there are many others whose disabilities have been either cured or sufficiently relieved by the residence of a year or more at the Hospital School to enable them to take up the regular courses of public school education, returning to the homes and to the usual life of normal activity.

It is desirable as a guide to methods of instruction and training, and to assist in securing work for these graduates, to employ as a field worker some one familiar with the methods of the school and one acquainted with the opportunities in the Commonwealth for suitable employment.

Great assistance has been given to the school, and encouragement to the pupils by the Alumni Association, which has been recently formed, and which under its own organization visits the school annually at the graduation and also upon special occasions.

Not being able to make contracts for the erection of an east extension to the administration building and its furnishings, for which an appropriation of \$15,000 was made by the Legislature of the present year, it was decided to proceed with the erection under the direct supervision of our own organization. The work is progressing satisfactorily, and we feel confident that it will be completed within the amount available for the purpose.

The urgent need of more land for cultivation was rendered temporarily less acute this year through the kindness of neighbors, who gave the school the use of land for war gardens. This privilege we cannot reasonably expect another year.

We have also been obliged to rent pasture land for our young stock as we did last season. This demand will naturally increase with the growth of the young heifer calves we are raising, and which we deem an economical practice to follow.

It should also be borne in mind that with our present land capacity upon which we feel the production has almost reached its maximum, the needs of the institution demand the purchase of such foodstuffs as might be produced by our own efforts if we possessed the necessary increased acreage, as well as providing healthful training and occupation for many of our pupils through the growing and preservation of these foods required by us, and through this channel training them to become producers during the after years of their lives.

Notwithstanding our realization of the unusual demands upon the State this year, in the interests of real economy we feel that it would be a serious mistake to longer delay the purchase of available land which may never be had at a price somewhat less than the average price for similar land in the same locality.

The trustees feel constrained to refrain from making further recommendation for increasing the facilities and extending the field of usefulness of the school, although needed and recog-

nized. As this would ordinarily call for further appropriation of money, they think it advisable to delay action for another year, or until conditions become more nearly normal and the financial burdens of the State somewhat relieved.

Although the demands of war conditions have brought to us a share of its burdens resulting in greater demands upon the time, thought and energy of those who compose our organization under the able leadership of our superintendent, aided and supported by the staff of officials and assistants selected and trained by him, the work of the school has moved forward with ever-increasing efficiency.

In view of the large increase in cost of all materials, as well as labor, we refer with pride to the fact that the increased cost of maintenance is very slight. This has been the result of rigid economy and the most careful selection and purchasing by our superintendent, whose example has permeated through the entire organization, producing and maintaining a spirit of mutual helpfulness participated in by all.

So forcibly has the spirit impressed the trustees that we wish to thus publicly commend the loyal efforts and generous services of the entire institution staff.

We refer to the annual report of the superintendent and treasurer, which is annexed hereto and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
ALFRED S. PINKERTON.  
WILLIAM F. FITZGERALD.  
WALTER C. BAYLIES.



## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I respectfully present herewith my tenth annual report of the operations of the Massachusetts Hospital School for the year ending Nov. 30, 1917.

In reviewing the work of the year, it is pleasing to note that a larger number of applications for admission has been received than in any previous year, and that the school has a rapidly increasing number of successful alumni. Of the 720 children received since the school was established, 357 have been under treatment during the year just closed. The greatest number at any one time during the year was 291 on November 21, the smallest 206 on December 24, and the daily average number, 272.98. This is approximately the largest average it will be possible to maintain with the present capacity for 300, as there are at all times a few children who are home on visit, and especially over the holidays a comparatively large number are absent.

Since no charge is made for the board of children who are on temporary leave, and with no corresponding reduction possible in the pay roll, heat, light and various other maintenance expenditures, it might be claimed that the number and duration of visits should be restricted, so that a higher daily average might cause a lower per capita cost. Unfortunately, however, the value of carefully arranged visits cannot be shown by the ledger account. Parents, and through them the public generally, are brought into closer touch and sympathy with the school when its work can be reviewed and discussed by the pupils as its representatives in their home circles. Family ties are strengthened in certain homes where parents might become indifferent to the welfare of an unfortunate child through long-enforced separation; and children who are brought into intimate personal contact with their friends while being trained for self-support will find less difficulty in securing employment when they are finally discharged.

## ADMISSIONS

for the year exceeded those of the preceding period by 19, 81 having been received. The average age upon admission was nine years, one month, the oldest being fifteen years, eleven months, the youngest three years, seven months.

Now that the purpose of the school is becoming better understood, the number of applications for the admission of hopelessly unpromising cases is becoming increasingly less each year. Nevertheless, there are still many pathetic appeals from distressed parents and perplexed physicians who do not know where else to apply for the relief of the burden of those who have become a serious problem in the home. Where to draw the lines of exclusion in dealing with these cases has been an often recurring uncertainty. Frequently it has been found necessary to discriminate between doubtful and less doubtful cases. It is more than probable that some charity workers and physicians have differed with us as to what are the proper cases the institution is designed to receive, or will insist, perhaps, that less promising cases have been admitted to the exclusion of others more hopeful, and possibly errors in this respect have been made, in spite of careful effort to avoid them. Children in the advanced stages of organic heart disease are in a sense crippled, as are also cases of spina bifida with trophic ulcers of long standing; yet it is inconceivable how such cases can, in justice to the taxpayers, be admitted to increase the cost of maintaining a school department to those who are able to profit by school training. Especially emphatic have been a few requests to admit children who are physically and mentally of the type ordinarily taken into the school, but who have reached the maximum admission age before their parents have fully appreciated the importance of early training or become convinced that home care and training is impracticable. A few applicants of uncertain mentality have been admitted with the understanding that they would be removed after a reasonable time for observation, in case they were found to have defective minds. As a class, however, the applicants for admission, like the children who have been received, present most gratifying proof that the purpose of the

school is very generally appreciated and understood, and that our efforts to have it maintained distinctly unlike a hospital or an asylum home for incurables will be amply recompensed.

Exclusive of two whose birthplaces were unknown, 68, or 84— per cent., of the 81 children admitted were born in Massachusetts; 6, or 8— per cent., were born in other parts of the United States, and 7, or 8+ per cent., came from foreign countries. The nativity of 14 fathers and 9 mothers was unknown. Out of the remainder, 17, or 21— per cent., of the fathers, and 18, or 22+ per cent., of the mothers, were born in Massachusetts; 3 fathers and 6 mothers were born in other parts of the United States, and 61, or 75+ per cent., of the fathers, and 57, or 70+ per cent., of the mothers, were foreign born.

Perhaps the best index of the year's work will be found in a review of the cases who have been

#### DISCHARGED.

Sixty-seven left during the year, most of them going out on trial visits with an opportunity to return within a reasonable period if for any reason it became advisable. Nineteen had either recovered or were so much improved that they were considered able to attend school in competition with normal children. Practically all in this group, classifiable as temporary cripples, came to us for the treatment of the deformities of rickets and tuberculous bone disease. Their average length of residence here while completing their convalescence and attending school was five years and seven days. Thirteen others of the same type, who were not to continue their education after leaving this school, as well as those more permanently crippled, were discharged as capable of self-support. Two, who left when no further improvement seemed possible, were capable of partial self-support. One fourteen-year-old boy remained but four days, and left on account of homesickness. Two children died, the cause of death in one being acute indigestion and acute dilatation of the heart in a case of extensive paralysis and deformities of back, chest, arms and legs; in the other, organic disease of the heart in a case of congenital deformity of the spine and chest. Of the remaining 30, 8 were

discharged home as mentally unpromising, 1 was returned to a general hospital, 2 were transferred to the State Infirmiry, 1 to the Wrentham State School, 1 to the Monson State Hospital, 1 to leave the State; 1, still improving, because she reached the age of twenty-one years, and 15 failed to return from visit.

There are still 25 children in the school who have been graduated from the grades. Some of them are not yet physically strong enough to leave, and should remain while they continue to improve. The tuberculous cases principally are in this group, and most of them are making good recoveries. One resident graduate is decidedly lacking in initiative, which appears to be an inherited trait accentuated by a great physical handicap. The patient is still young and has been permitted to remain, in the hope that an ambition to become a useful member of society in the future may be stimulated by the example of others among our alumni, who, though similarly afflicted, are successful breadwinners. Several others are taking most practical courses in vocational training by serving a voluntary apprenticeship to the skilled employees, who perform the necessary work of the institution. For example, one boy has very recently been given a license to operate motor vehicles, and is daily gaining an experience in the care and management of our automobiles which will very soon qualify him for the employment he desires. Another has become so much interested in the dairy that he will without doubt be commanding a substantial wage before another spring. Still other graduates may be found with the tailor, the cobbler, and in the offices and storeroom. Perhaps one of the best illustrations we have had during the year of the value of the elective method of apprenticeship training is that of a boy who completed the grammar school course at home before coming here, and therefore did not enter our grades. He had lost the use of both forearms and hands, but he was cheerful, energetic and ambitious to succeed. He was permitted to spend his time in practically any department to which he showed an inclination to go, until he became well acquainted with the institution and the opportunities afforded. He was then assigned to assist in one of the offices where he seemed to show the greatest interest. He was held responsible for certain definite work of importance which,



though small at first, was gradually extended until he left to accept a desirable position in the office of a large transportation company. This boy is successfully supporting himself as a direct result of the practical industrial training he received from employees, who were not engaged primarily to teach. In fact, some of the most prosperous discharged cases have been unable for one reason or another to pass the final examinations in the grades, or to maintain the standard required for our regular diploma, which is intended to represent the equivalent of the education given by the average public grammar school. While I do not wish to minimize the importance of the regular grade work, I believe that some emphasis should be placed upon the fact that the course of study necessary to obtain a diploma even from a grammar school is simply impossible to certain boys and girls of average intellect if their health has been broken and their energies exhausted by accident and disease.

The decision of your Board to give an industrial diploma to special pupils is consistent with the physiological methods of instruction which the school has followed from the first, and will tend to develop the capabilities of every pupil and encourage the most unfortunate for the humble positions they are destined to fill. One industrial graduate, discharged during the year, was a member of the class of 1914. Pott's disease in an aggravated form prevented her from graduating with her own class, and she had no ambition to enter succeeding classes. She became most expert in practical and fancy needlework, and finally recovered at the age of twenty-one. She now takes full charge of her home while other members of the family are away at work, and is teaching private classes in sewing. Another girl, permanently crippled from infantile paralysis, who left the school in June, entered the primary grade when admitted in 1908. Not keen mentally, but a faithful, conscientious worker, she managed to receive her promotions until the latter half of her senior year, when she failed to make any further progress. Realizing her limitations in the grades, her teacher recommended that she be assigned exclusively to the domestic science group where she excelled, and she prepared herself for her present position as cook and earned her right to the industrial diploma which was given to her in June.

Crippled children should not be allowed to feel a sense of defeat because of their physical handicap or to think that they have not a useful place to fill in the world. The educational needs of such children cannot be fully appreciated except by teachers especially gifted and trained by long experience to understand their psychology and the probable termination of their physical disabilities.

It is desirable for the welfare of the school that the most efficient services of the head teacher be recognized by a substantial increase in salary, and that the rates paid to her best qualified assistants are not permitted to remain below the constantly increasing salaries paid to the teachers in the public schools. The

#### SCHOOL

year has been one of good promise, largely because we have been so fortunate as to retain our teaching staff unchanged. In the spring, owing to the increased need for her services, we were able to have our sewing teacher placed upon full time. One period a day, the first hour in the morning, she devotes to kindergarten instruction for children admitted without previous schooling. By keeping this group small she has been able to promote rapidly, as fitness warranted, to the various primary divisions. This saves interruption in the work of the regular first grade teacher. The new division has relieved the pressure of numbers in the classes for pupils of that age. The graduating class of 1917 was our largest up to the present date. The whole plan of the exercises was given a strong war-time trend by the entrance of our nation into the great contest. Our children are for the most part fervently interested in citizenship, its duties and privileges. It would almost seem that because in their lives the State is a very familiar and ever-present reality, rather than a distant ideal, the older and more thoughtful take keener personal interest in questions of government. There has been constant and happy response to calls upon our boys and girls for more help in farm production, for still greater household economy, for Red Cross work, and in general for an increased amount of earnest and cheerful devotion to everyday tasks.

Our sewing classes show steady growth in interest and com-



petence. Our girls have had, from the first years of the existence of the school, thorough and practical instruction in needlework. This is shown by the fact that a number of our earlier graduates are now earning a living by sewing. All our girls above the age of eight and physically able to be in school receive their training in carefully graded classes. The little ones learn simple stitches, and then make household linen for the various buildings. Next they learn to make aprons, underwear and the simpler articles of wearing apparel, passing on in the graduating class to the making of a dress. The class of 1917 showed great enthusiasm over their middy dresses, in blue and white, the class colors. These drew forth many admiring comments from the visitors at our annual exhibition. Since September we have had a dressmaking class for these older girls. One of our most remarkable seamstresses is a fifth-grade girl. Because of her paralyzed hands, she is obliged to use her toes for any work requiring careful manipulation. She had on exhibition last summer a beautifully made nightgown. She can run a sewing machine easily, and is now, with much zest, taking up knitting and embroidery. We have held since September a weekly Red Cross class, working for the local branch. This class has finished many hospital handkerchiefs, a large number of scarfs, crutch pads and comfort bags. Much voluntary outside work has been done. Our sewing teacher believes that this has not hindered the accomplishment of our usual amount of institution work, but that on the contrary the added interest has reacted favorably upon routine tasks.

With the beginning of the fiscal year we were able to have on full time a much-needed handiwork teacher. We are now giving to all our children physically able to take it, a graded course in various handicrafts. This ranges from cutting, weaving and simple construction for the primary pupils, to basketry, rug weaving and woodwork for the older ones. After the fifth grade, our girls confine their attention to sewing instead. The pupils have made light pieces of furniture, napkin rings and tray stands for the main dining room, and repaired and refinished some of the school furniture. But the course is not primarily to produce usable articles, so much as to develop the pupil's own powers. A well-rounded education

must include skill of hand as well as of mind, and the one indeed reacts upon the other. There are grave dangers in education mainly for material and vocational ends. The balance must be kept even. This we try to approach in the opportunities provided for our children. It is a fact, in which we feel pride, that every girl graduated from our eighth grade, except one very badly handicapped, can cook a wholesome meal and do her own sewing. As our pupils go back and forth from school to shop or kitchen, none in class for more than two hours daily, they, as well as the average observer, are entirely unconscious of the fact that they are exemplifying theories lying at the base of several widely advertised educational systems.

As the number of our graduates increases alumni activities assume more prominence. The association formed last year is in a flourishing condition. There was a dinner, largely attended by representatives from every class, in June of this year. In the fall the association held a reception, which took the form of a surprise and presentation to the superintendent. There is evident at all these occasions an honest pride in individual achievement and much loyalty to the school. These troubled times cause us all to ask how our lives measure in terms of service to State and Nation. There is proof in the bright faces of most of our young alumni, in the pride with which they wear their class pins designed on the Massachusetts seal and in their sincere expressions of gratitude toward the Hospital School, that they, as children of this great Commonwealth, intend to make a loyal discharge of their debt to the Mother State. One young man of the class of 1916 has volunteered in the military service of his country. While we feel great pride in this, we realize that others are serving no less loyally elsewhere. So, bit by bit, we build our humble contributions into the larger life which shall open before our nation, renewed in faith to her old ideals of opportunity for every man.

#### THE MEDICAL

problems, so numerous and always present, have not been complicated by the appearance of any contagious disease of importance. One child was sent to us in January from a home in

which chicken pox was present. We did not learn of the fact until the disease appeared upon the exposed child, who was promptly isolated, and but seven others were mildly infected. The infirmary wards have been filled to capacity not only by the cases sent there for physical examination and the treatment found necessary in newly admitted patients, but also by the surgical and medical emergencies which frequently arise. The usual amount of laboratory and X-ray work has been accomplished with satisfactory results. Splints have been more carefully standardized, and the apparatus generally has been given a more finished appearance as our mechanics gain in experience, and the advancement of our efforts has not been interrupted by changes in the medical staff. As all children received are suffering from some physical defect which incapacitates them from ordinary school life, a most careful medical supervision of their progress must be maintained.

Infantile paralysis and surgical tuberculosis are directly responsible for the majority of our admissions. In a statistical record of 720 cases, 285 were found to have been tuberculous, and 177 to have deformities following infantile paralysis. Seventy-seven per cent. of the cases received during the past year were suffering from the effects of one or the other of these diseases. When the cases of clubfeet and the deformities of rickets and malnutrition, which more than equal the relatively small number of nonrecoverable tuberculous cases, are taken into consideration, it seems fair to assume that the record of the past ten years is a fair index of the comparatively large number of recoverable cases which the institution will be able to direct back into the community to enter into competition with normal boys and girls. By carefully restricting the admissions to include the improvable cases and those who are likely to profit by the special care and training which the school is organized to give, it can readily be seen what a valuable service the institution can render to the public. After the deformities have been corrected in the paralytics and the afflicted children have been trained to their maximum physical efficiency, the chief factor to be considered for their future advancement is that of education. One of the chief obstacles to the proper selection of the cases most deserving assistance

to a future life of usefulness has been the meagre information obtained from formal application papers. Even correspondence with examining physicians and abstracts from hospital records have sometimes been most unsatisfactory. Children taken to hospital clinics for examination for physical disabilities are not apt to be observed with special reference to their mentality. On the other hand, physical disabilities are not apt to be correctly diagnosed when cases are examined at home. In a recent application practically the only information obtained was that the child had "a peculiar gait." When indefinite applications have been received from Greater Boston, it has been found desirable to send one of our physicians to examine the child, but so many applications are now being received that it is becoming impracticable to send one of our staff to examine all the questionable cases even in the near-by district. It would doubtless be of decided economic value to the school if we now had a field worker or social service agent familiar with the function of the institution, in which she should make her headquarters, to investigate applications for admission and follow up discharged cases. We have heretofore been able to keep in touch with the graduates of the school by correspondence; but the task has now assumed such proportions that the time of one person can very profitably be given to the work. I would therefore recommend your consideration of the appointment at an early date of a person qualified to serve as a representative of the institution in the community.

Clinics have been held for the orthopedic classes of the Harvard Medical School as in past years and instruction, which has been sought by district nurses, charitable organizations, social workers and others interested in the welfare of school children in general and physically defective children in particular, has been freely given by officials of the school at various times throughout the year. Larger clinics were held in November for members of the orthopedic unit of the Medical Officers Reserve Corps. Amputation deformities, disabilities resulting from accidents, certain paralytic conditions and other cases comparable to those which are produced by war were selected for study. The interest shown by the army surgeons in the various artificial appliances in use, and the public desire



so apparent everywhere to make preparations for the relief of disabled soldiers, and the final training of war cripples for useful occupations consistent with their disability, would indicate that there is a demand for information which this and similar institutions may be able to furnish. It would appear that the study of the needs of the cripple has entered a new era, and that opportunities for the physically handicapped as well as the industrial education of the cripple will become of interest to all. A report is now being prepared to show in greater detail than can be published in an annual report what has been accomplished by the school and its graduates during a period of ten years.

Operations for the correction of clubfeet, simple tenotomies and all minor surgical operations performed during the year have been attended to by the resident staff. Members of the Board of Consultants have responded whenever their expert opinion has been needed in doubtful cases or special surgical emergencies, and the institution is under renewed obligation to these specialists, whose generous assistance has contributed so largely to the success of the school.

### THE DENTIST

has made regular weekly visits as in preceding years to examine all newly admitted patients and perform such other dental work as the time allotted him will permit. The records show that 139 cases have been treated, with a total of 263 operations performed, as follows: 17 amalgam fillings, 33 cement fillings, 19 euginol zinc oxide fillings, 7 gutta percha fillings, 9 root fillings, 71 cleanings, 5 pulp removals, 4 treatments and 94 extractions.

### IMPROVEMENTS

under special appropriations as well as the ordinary maintenance repairs have not been carried through to completion as they would have been under normal market and labor conditions. The contract for the erection of the west wing extension to the administration building was completed in February, 1917, and soon made ready for occupancy by the resident workmen who did the painting, plumbing, steam fitting and electric wiring.

The building is 31 by 40 feet and extends directly south from the west end of the administration building, of which it is made an integral part. While the new wing is designed to conform as closely as possible to the style and architecture of the original building, the primary object has been to provide the much-needed office room and better accommodations for the superintendent. The fireproof vault which opens directly out of the cashier's office contains ample space for case histories and other institution records for many years to come, and the offices upon the first floor and the accommodations now provided for the superintendent are most satisfactory. Several most substantial gifts of furniture presented to the superintendent by a member of your Board obviated the necessity of purchasing at this time articles which will eventually be needed to furnish the superintendent's office and some of the new rooms added to the suite reserved for his use.

The appropriation of \$13,000 (chapter 119 of the Resolves of 1916) for the west wing extension was closed by the return to the State treasury of an unexpended balance of \$1.32. An ice house of 260 tons capacity, one of the buildings provided for by the appropriation of \$11,250 for improvements and equipment (chapter 119 of the Resolves of 1916), was built early in the year by our own carpenters with the assistance of some day labor and completed in season for the storing of our year's supply of ice. The ice house was built at a cost of \$904.19, and is located as near the Reservoir Pond as the southern boundary line of the institution property will permit. Under the same appropriation provision was also made for some poultry houses, which are now in process of construction. Their completion has been delayed because of the difficulty in securing supplies and labor; but with the assistance of some of the older boys our carpenters hope to have them ready for use in the early spring. The piggery referred to in last year's report is practically completed and another appropriation balance, though small, is now assured.

The appropriation of \$15,000 (chapter 104 of the Resolves of 1917) for the east wing extension to the administration building was thought to be amply adequate for the purpose when the estimate was made. Advertisements for bids were published



in several newspapers having a wide circulation, with the result that but two responses were received on July 20, 1917. The lowest bid, which did not include the heating, lighting, plumbing or furnishing, was \$18,860. Both bids were therefore rejected and the work readvertised, another bid thereby being secured, but at a higher estimate than the two previous ones. Our own resident mechanics were then asked to study the plans and specifications to see if we were not justified in undertaking the work upon a day basis. After an exhaustive study it was thought possible to erect the building within the amount available. The foundations have been put in by a local contractor, the brick walls laid to the top of the first story windows, materials for the masonry and practically all the dimension timbers purchased well within our carpenter's estimate. If no further advances are made in the market there is a fair prospect that the building will be completed as planned before the end of another year.

#### REPAIRS

to the buildings, which are principally constructed of wood and subjected to the hardest usage, are constantly being made in an effort to keep the property in a good state of preservation. Whenever possible, the work under this item has been done in a thorough manner with a view to minimizing the cost of maintenance in the years to come. It should be borne in mind that children whose energies should not be rigidly suppressed, and for whose welfare a very liberal amount of freedom should be permitted, will mutilate and destroy property as a natural part of their existence. When allowance is made for the steel shoe plates and splints, wheel chairs and crutches which pass through our corridors and wards thousands of times every year, we sometimes marvel that even more repairs are not necessary. Broken glass, 315 panes, is the record for the year, holes picked into plastered walls and names scratched into the painted finish, all bear witness to the class of patients we are called upon to treat, and indicate the amount of work required of our carpenters and painters. And yet experience has shown that comparatively little damage is done in a malicious or willful desire to do wrong; but rather because of faulty training or no training at all, or to gratify a childish curiosity to find out

how things are made, and frequently as a result of carelessness at play.

The south sides and the east and west ends of both dormitories have been given a fresh coat of paint, and besides the new work which the painter has done upon the west wing of the administration building, ice house and piggery he has also found time to do much interior painting in all the buildings, particularly at the infirmary and at the boys' cottage.

The efficient engineer, with the help of his assistants, some of whom were boys in the school, has done all the plumbing, steam fitting and electric wiring in the new buildings, made all repairs upon similar installations, and turned out from the apparatus shop 123 repaired splints and 298 new splints, shoe plates and braces of various kinds.

The sewing room, through which all the linen and clothing is sent to be marked, classified, repaired and distributed, has turned out the following manufactured articles: 216 sheets, 231 nightgowns, 116 blouses, 38 table cloths, 13 girls' coats, 8 corset covers, 36 table napkins, 32 E. Z. waists, 23 boy scout suits, 5 awnings, 3 laundry bags, 25 pairs of drawers, 14 boys' outside suits, 22 negligee shirts, 17 petticoats, 9 princess slips, 538 towels, 92 dresses, 69 pairs of bloomers, 397 pillow slips, 37 aprons, 3 State flags, 6 cooking caps, 50 pairs of boys' trousers, 56 pairs of curtains, 6 brace aprons, 30 frame covers, 29 bureau scarfs, 5 romper suits, 24 draw sheets, 39 bed socks, and 34 eiderdown coats.

The success of the

#### FARM

is attributable in no small degree to the untiring efforts of the farmer, who has with comparatively little assistance converted the very rough scrub woodland into a fair state of production in a period of less than ten years. Through the generosity of one of the good citizens of the town, who recognized the needs of the institution for more land for cultivation, especially in time of war, several acres adjoining the school property on its eastern border were voluntarily given for the use of the school for some of the season's crops. This land and that known as the Polo Field, which was made available through the courtesy

of the Metropolitan Park Commission, added to that owned by the school produced for our own use the following crops: 970 bushels of potatoes, 725 bushels of field corn, 75 tons of ensilage corn, 100 tons of corn fodder,  $44\frac{3}{4}$  tons of green feed (millet, oats and cow peas, barley, grass, green corn and rye),  $4\frac{1}{2}$  tons of cabbage and 25 barrels of Savoy cabbage, 32 bushels string beans, 15 bushels dry beans, 23 bushels shell beans, 19 bushels beets, 22 bushels beet greens, 39 quarts Brussels sprouts, 68 bushels carrots, 4 bushels cauliflower,  $44\frac{1}{2}$  bushels Swiss chard, 5 boxes celery, 151 bushels sweet corn,  $21\frac{1}{2}$  boxes cucumbers, 20 bushels small cucumbers for pickles, 7 boxes lettuce,  $6\frac{1}{2}$  bushels onions, 28 bushels parsnips, 39 bushels green peas, 3 bushels dry peas, 6 bushels green peppers, 1 ton of pumpkins, 1 bushel radishes, 566 pounds rhubarb, 27 bushels spinach,  $7\frac{1}{2}$  barrels summer squash,  $1\frac{1}{2}$  tons winter squash, 49 bushels tomatoes and 114 bushels turnips.

Seven thousand one hundred and fifty-two pounds of pork were also raised.

It is not at all certain that we shall have the free use of land for cultivation even for another season, or that the pasture land rented for our young stock will be much longer available. I would therefore recommend that your request of last year for an appropriation of \$15,000 for the purchase of land be made again the coming year.

Milk, which is such an important article of diet for children, has been very largely supplied by our own herd of cows. Fifty-one thousand eight hundred and eighty-three quarts were produced during the year at an estimated cost, according to the analysis prescribed by the State Auditor, of \$0.0594 per quart. The cows have been given the tuberculin test by a competent veterinary, who pronounced them to be in a good state of health. Every effort has been made to keep the herd free from any outside source of infection, extra milk which has been needed from time to time being met by purchase in the open market rather than by bringing new cows into the herd. All the promising heifer calves of the thoroughbred bull are being raised to replace the older cows and to increase the milk production as necessary.

The enthusiasm displayed by the boy scouts in the cultiva-

tion of their crops, amounting to  $16\frac{1}{2}$  bushels of corn, 21 bushels of potatoes and  $1\frac{1}{2}$  bushels of yellow-eye beans, has been an inspiration to all, and preparations are being made by the scouts for an increased production the coming season.

#### MAINTENANCE

expenses for the year amounted to \$93,125.27, representing a weekly per capita cost of \$6.5604, a per capita increase of \$0.5294 per week over the preceding year. Of this sum \$53,626.79 was received by legislative appropriation, the income from other sources being \$43,083.21, making the net weekly per capita cost to the State \$3.7778.

We were obliged to close the year without our usual supply of coal. Some other items in our inventory also show a shrinkage because of our inability to place orders or secure deliveries. In further explanation of the unexpended maintenance appropriation balance amounting to \$3,584.73 should also be mentioned the vacancies in various departments caused by the resignation of employees, who have been induced to leave by the attractive wages offered for labor in other lines of industry.

The leave of absence given the head nurse Miss Eastman in June made it possible for her to join one of the base hospital units. Before Miss Eastman left for France she introduced Miss Marion Brown, a graduate of the Springfield General Hospital training school, into the service, which she has directed in a most satisfactory manner as Miss Eastman's temporary successor. The position of housekeeper was made vacant in February by the resignation of Miss Ida C. Lyman, who was obliged to retire after a number of years of most valuable service. Mrs. Lillian S. Swimm returned in August to the housekeeper's position, which she formerly held. The clerical work of the institution, increasingly more complicated and exacting each year, has been most acceptably carried on by a corps of experienced assistants, and the institution has been especially fortunate in being able to retain the services of the assistant physicians and the heads of other departments who have become acquainted by long service with the important work in which they are engaged.

Special acknowledgments are due to those who have remembered our children by most acceptable gifts, to the clergymen and the many friends who have taken an interest in the progress of the school, and finally I owe more than I can well express to the trustees for their kind criticism and advice and the considerate manner in which they have directed my work for the year.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*



## TERMS OF ADMISSION.

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Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Congenital clubfeet, . . . . .	2	—	2
Osteomyelitis, . . . . .	2	—	2
Paralysis, brachial, . . . . .	2	—	2
Paralysis, infantile, . . . . .	15	14	29
Paralysis, spastic, . . . . .	5	—	5
Rachitic deformity, . . . . .	—	2	2
Round shoulders and flat feet, . . . . .	1	2	3
Scoliosis and flat feet, . . . . .	1	—	1
Traumatic dislocation of knee, . . . . .	—	1	1
Tuberculous disease of foot, . . . . .	1	—	1
Tuberculous disease of hip, . . . . .	11	5	16
Tuberculous disease of knee, . . . . .	1	3	4
Tuberculous disease of spine, . . . . .	6	5	11
Tuberculous disease of spine and ankle, . . . . .	—	1	1
Tuberculous disease of spine and hip, . . . . .	—	1	1
Totals, . . . . .	47	34	81



## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	68	17	18
Other New England States, . . . . .	5	2	5
Other States, . . . . .	1	1	1
Total native, . . . . .	74	20	24
Other countries: —			
Austria, . . . . .	—	6	7
Canada, . . . . .	—	9	8
England, . . . . .	—	—	2
Finland, . . . . .	1	1	1
Ireland, . . . . .	1	5	7
Italy, . . . . .	3	8	8
Germany, . . . . .	—	1	—
Greece, . . . . .	—	2	2
Norway, . . . . .	—	1	—
Poland, . . . . .	—	1	2
Portugal, . . . . .	—	1	—
Russia, . . . . .	—	5	5
Scotland, . . . . .	—	1	—
Sweden, . . . . .	—	1	1
Syria, . . . . .	—	1	1
Western Islands, . . . . .	—	4	4
Total foreign, . . . . .	79	67	72
Unknown, . . . . .	2	14	9
Totals, . . . . .	81	81	81

## VALUATION.

Nov. 30, 1917.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building with added wing and extension under construction, two dormitories and power house,	161,672 59
Equipment for heat, light and power, . . . . .	6,883 47
Infirmary, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn with silos, . . . . .	3,250 88
Milk house, . . . . .	761 38
Isolation barn and hen house, . . . . .	280 00
Hen houses, . . . . .	663 31
Garage, . . . . .	1,954 01
Piggery, . . . . .	2,805 05
Ice house, . . . . .	904 19
Two isolation houses, . . . . .	501 00
Shop, . . . . .	150 00
Fairbanks scales, . . . . .	745 31
Granolithic walks, . . . . .	3,372 92
Water system, . . . . .	8,304 28
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	136 86
	<hr/>
	\$314,804 76

## PERSONAL PROPERTY.

Travel, transportation and office expenses, . . . . .	\$4,989 68
Food, . . . . .	6,094 42
Clothing and clothing materials, . . . . .	8,353 33
Furnishings and household supplies, . . . . .	29,978 64
Medical and general care, . . . . .	5,315 28
Heat, light and power, . . . . .	1,951 48
Farm and stable, . . . . .	12,019 18
Grounds, . . . . .	10 95
Repairs, ordinary, . . . . .	5,094 58
	<hr/>
	\$73,807 54

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1917:—

### CASH ACCOUNT.

Balance Dec. 1, 1916,	\$3,259 06
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*Receipts.*

*Institution Receipts.*

Board of inmates:—

Private,	.	.	.	.	\$1,046 11
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Cities and towns, . . . . .	30,328 30
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Reimbursements, charitable

(State minor wards), . . . . .	10,549 90
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\$41,924 31

Sales: —

Travel, transportation and

office expenses, . . . . .	\$2 65
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Clothing and materials, . . . . .	37 47
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Medical and general care,	3 09
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Farm and stable:—

Cows and calves,	\$56 50
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Pigs and hogs,	10 00
----------------	-------

66 50

Repairs, ordinary, . . . . .	36 98
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146 69 .

Miscellaneous receipts: —

Interest on bank balances,	\$133 70
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Sundries, . . . . .	377 36
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511 06

42,582 06

*Receipts from Treasury of Commonwealth.*

Maintenance appropriations:—

Balance of 1916,	\$3,505 06
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Advance money (amount on hand November 30),	6,800 00
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Approved schedules of 1917,	83,457 88
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93,762 94

Special appropriations,	12,640	38
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[illegible]

## PAYMENTS.

To treasury of Commonwealth, institution receipts, . . . . .		\$42,582 06
Maintenance appropriations: —		
Balance November schedule, 1916, . . . . .	\$6,952 97	
Eleven months' schedules, 1917, . . . . .	83,457 88	
November advances, . . . . .	3,370 66	
		<hr/> 93,781 51
Special appropriations: —		
Approved schedules, . . . . .	\$12,640 38	
Less advances, last year's report, . . . . .	188 85	
		<hr/> \$12,451 53
November advances, . . . . .	550 22	
		<hr/> 13,001 75
Balance, Nov. 30, 1917: —		
In bank, . . . . .	\$2,813 62	
In office, . . . . .	65 50	
		<hr/> 2,879 12
Total, . . . . .		<hr/> \$152,244 44

## MAINTENANCE.

Appropriation, current year, . . . . .	\$96,710 00
Expenses (as analyzed below), . . . . .	93,125 27
	<hr/>
Balance reverting to treasury of Commonwealth, . . . . .	\$3,584 73

## Analysis of Expenses.

Salaries, wages: —		
John E. Fish, M.D., superintendent, . . . . .	\$3,500 00	
General administration, . . . . .	15,518 87	
Medical service, . . . . .	2,021 67	
Ward service (male), . . . . .	3,046 34	
Ward service (female), . . . . .	10,778 91	
Repairs, . . . . .	1,991 97	
Farm and stable, . . . . .	2,593 81	
Grounds, . . . . .	147 14	
		<hr/> \$39,598 71
Religious instruction: —		
Catholic, . . . . .	\$520 00	
Jewish, . . . . .	520 00	
Protestant, . . . . .	520 00	
		<hr/> \$1,560 00
Travel, transportation and office expenses: —		
Automobile repairs and supplies, . . . . .	\$1,000 83	
Postage, . . . . .	199 04	
Printing and binding, . . . . .	176 92	
Printing annual report, . . . . .	74 89	
Stationery and office supplies, . . . . .	210 49	
Telephone and telegraph, . . . . .	397 05	
Travel, . . . . .	161 81	
Freight, . . . . .	12 87	
		<hr/> 2,233 90
Amount carried forward, . . . . .		<hr/> \$43,392 61

*Amount brought forward,* . . . . . \$43,392 61

## Food:—

Butter, . . . . .	\$4,214 48
Butterine, . . . . .	282 30
Beans, . . . . .	311 12
Bread, crackers, etc., . . . . .	138 29
Cereals, rice, meal, etc., . . . . .	446 86
Cheese, . . . . .	92 08
Eggs, . . . . .	2,255 28
Flour, . . . . .	2,823 40
Fish (fresh, cured and canned), . . . . .	1,144 60
Fruit (fresh), . . . . .	628 71
Fruit (dried and preserved), . . . . .	333 94
Lard and substitutes, . . . . .	141 04
Macaroni and spaghetti, . . . . .	12 12
Meats, . . . . .	5,905 22
Milk (fresh and substitutes), . . . . .	369 36
Molasses and syrups, . . . . .	87 09
Peanut butter, pie filling, etc., . . . . .	97 94
Potatoes, . . . . .	104 75
Seasonings and condiments, . . . . .	259 81
Sugar, . . . . .	1,430 92
Tea, coffee, cocoa, etc., . . . . .	356 98
Vegetables (fresh), . . . . .	268 56
Vegetables (canned and dried), . . . . .	292 83
Yeast, baking powder, etc., . . . . .	224 50
Sundries, . . . . .	20 38
Freight, . . . . .	275 36

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22,517 92

## Clothing and materials:—

Boots, shoes and rubbers, . . . . .	\$487 89
Clothing (outer), . . . . .	598 08
Clothing (under), . . . . .	120 00
Dry goods for clothing, . . . . .	616 30
Hats and caps, . . . . .	14 38
Leather and shoe findings, . . . . .	335 38
Machinery for manufacturing, . . . . .	60 00
Socks and smallwares, . . . . .	672 89
Freight, . . . . .	12 39

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2,917 31

## Furnishings and household supplies:—

Beds, bedding, etc., . . . . .	\$934 40
Carpets, rugs, etc., . . . . .	246 45
Crockery, glassware, cutlery, etc., . . . . .	351 13
Dry goods and smallwares, . . . . .	54 59
Electric lamps, . . . . .	107 24
Fire hose and extinguishers, . . . . .	24 50
Furniture, upholstery, etc., . . . . .	228 91
Kitchen and household wares, . . . . .	240 22
Laundry supplies and materials, . . . . .	845 45
Lavatory supplies and disinfectants, . . . . .	166 90

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*Amounts carried forward,* . . . . . \$3,199 79      \$68,827 84

<i>Amounts brought forward,</i>	.	.	.	.	\$3,199 79	\$68,827 84
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Furnishings and household supplies — *Con.*

Table linen, paper napkins, towels, etc.,	.	.			418 34	
Sundries,	.	.	.	.	29 55	
Freight,	.	.	.	.	62 75	
						3,710 43

## Medical and general care: —

Books, periodicals, etc.,	.	.	.	.	\$107 52	
Entertainments, games, etc.,	.	.	.	.	292 80	
Gratuities,	.	.	.	.	45 41	
Ice and refrigeration,	.	.	.	.	41 75	
Laboratory supplies and apparatus,	.	.	.	.	69 90	
Manual training supplies,	.	.	.	.	3 60	
Medicines (supplies and apparatus),	.	.	.	.	1,014 34	
School books and supplies,	.	.	.	.	416 42	
Water,	.	.	.	.	430 92	
Sundries,	.	.	.	.	46 23	
Freight,	.	.	.	.	41 00	
						2,509 89

## Heat, light and power: —

Coal,	.	.	.	.	\$4,868 07	
Freight on coal and other expenses,	.	.	.	.	3,082 74	
Gas,	.	.	.	.	20 00	
Oil,	.	.	.	.	97 62	
Freight,	.	.	.	.	4 77	
						8,073 20

## Farm and stable: —

Bedding materials,	.	.	.	.	\$167 42	
Blacksmithing and supplies,	.	.	.	.	130 40	
Carriages, wagons and repairs,	.	.	.	.	30 45	
Dairy equipment and supplies,	.	.	.	.	2 05	
Fertilizers,	.	.	.	.	418 65	
Grain, etc.,	.	.	.	.	3,326 50	
Hay,	.	.	.	.	1,093 43	
Harnesses and repairs,	.	.	.	.	5 46	
Labor (not on pay roll),	.	.	.	.	350 92	
Rent,	.	.	.	.	56 00	
Road work and materials,	.	.	.	.	209 40	
Spraying materials,	.	.	.	.	3 22	
Stable and barn supplies,	.	.	.	.	55 64	
Tools, implements, machines, etc.,	.	.	.	.	325 81	
Trees, vines, seeds, etc.,	.	.	.	.	412 05	
Veterinary services, supplies, etc.,	.	.	.	.	68 00	
Sundries,	.	.	.	.	20 92	
Freight,	.	.	.	.	28 33	
Gasoline for cutting ensilage,	.	.	.	.	10 25	
						6,714 90

## Grounds: —

Labor (not on pay roll),	.	.	.	.	\$31 50	
Road work and materials,	.	.	.	.	160 60	
Tools, implements, machines, etc.,	.	.	.	.	7 90	
						200 00

<i>Amount carried forward,</i>	.	.	.	.	.	\$90,036 26
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*Amount brought forward,* . . . . . \$90,036 26

Repairs, ordinary:—

Brick, . . . . .	\$4 00	
Cement, lime, crushed stone, etc., . . . . .	97 20	
Electrical work and supplies, . . . . .	58 12	
Hardware, iron, steel, etc., . . . . .	318 88	
Labor (not on pay roll), . . . . .	371 87	
Lumber, etc. (including finished products), . . . . .	698 56	
Paint, oil, glass, etc., . . . . .	837 02	
Plumbing and supplies, . . . . .	111 08	
Steam fittings and supplies, . . . . .	146 45	
Tents, awnings, etc., . . . . .	8 77	
Tools, machines, etc., . . . . .	76 89	
Boilers, repairs, . . . . .	253 64	
Sundries, . . . . .	70	
Freight, . . . . .	50 25	
		3,033 43
Repairs and renewals, roofing, . . . . .		55 58

Total expenses for maintenance, . . . . . \$93,125 27

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1916, . . . . .	\$11,173 21
Appropriations for fiscal year, . . . . .	15,000 00
Total, . . . . .	\$26,173 21
Expended during the year (see statement annexed), . . . . .	12,640 38
Balance Nov. 30, 1917, . . . . .	\$13,532 83

RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$2,879 12	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$3,370 66	
Account of special appropriations, . . . . .	550 22	
		3,920 88
Due from treasury of Commonwealth from available appropriation account November, 1917, schedule, . . . . .	2,867 39	
		\$9,667 39

*Liabilities.*

Schedule of November bills, . . . . .	\$9,667 39
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PER CAPITA.

During the year the average number of inmates has been 272.98.

Total cost for maintenance, \$93,125.27.

Equal to a weekly per capita cost of \$6.5604.

Receipt from sales, \$146.69.

Equal to a weekly per capita of \$0.0103.

All other institution receipts, \$42,435.37.

Equal to a weekly per capita of \$2.9894.

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Water supply, . . . . .	Res. 1913, chap. 38	\$7,000 00	—	\$6,738 08	\$261 92
Wing to administration building, . . . . .	Res. 1916, chap. 119	13,000 00	\$7,229 67	12,938 07	61 93
Improvements and equipment, . . . . .	Res. 1916, chap. 119	11,250 00	3,132 58	11,037 73	212 27
Water main and fire equipment, . . . . .	Res. 1916, chap. 119	900 00	132 12	757 28	142 72
Addition to administration building, . . . . .	Res. 1917, chap. 104	15,000 00	2,146 01	2,146 01	12,853 99
		\$47,150 00	\$12,640 38	\$33,617 17	\$13,532. 83

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK,  
*Auditor.*







ELEVENTH ANNUAL REPORT

OF

THE TRUSTEES

OF THE

MASSACHUSETTS HOSPITAL SCHOOL

(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH)

AT CANTON

FOR THE

YEAR ENDING NOVEMBER 30, 1918



BOSTON

WRIGHT & POTTER PRINTING CO., STATE PRINTERS  
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1919



PUBLICATION OF THIS DOCUMENT  
APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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<sup>1</sup> With Expeditionary Forces in France.



# The Commonwealth of Massachusetts.

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

It is with much pleasure that the trustees present the accompanying report of the superintendent of the Hospital School of the activities of the past year, especially as unusual difficulties have been encountered owing to the distressing epidemic which has severely visited this institution at the time of its ravages throughout the State. The year has also been memorable on account of the demands of war activities. That the institution has been able to pursue its work of beneficence without noticeable diminution of its energies is a source of congratulation as well as an evidence of the excellence of the management and direction of the State Hospital School.

The superintendent's report will give in detail the extent of the invasion of influenza and the measures taken to meet it. Little outside help was needed and that was cordially given by a few graduate nurses and the devoted mothers of patients, who were glad to give temporary assistance. The Commonwealth is much indebted to these volunteers. The fact that the mortality was unusually low, although the epidemic was extremely severe, may be fairly attributed to the excellent system of ventilation which gave to the wards all the advantages of outdoor treatment which was utilized successfully elsewhere by means of tents. The difficulties of the work were increased by the shortage of medical help owing to the demands for war surgeons. The great burden of the medical labor, therefore, fell upon the superintendent and his first assistant.

In spite of the fact of the increased cost of labor and material it is gratifying to report that the work completed under special appropriations has been done within the amount granted



by the Legislature. The east extension to the administration building, for the construction of which a grant of \$15,000 was voted (chapter 104, Resolves of 1917), has been practically completed within the appropriation by the resident workmen and the assistance of some local contract labor, as no contractor was found who would be willing to undertake the work at so small a cost.

It would be remembered that the school was authorized to erect a cow barn and to purchase a herd of cows to furnish milk for the institution. It was also requested, although not granted by the Legislature, that neighboring land be purchased for the pasturage of these cows. It has not yet seemed advisable to the Legislature to make this latter grant. This necessarily increases the cost of the maintenance of the herd, as the hiring of pasturage is necessary and there is no land available for the raising of hay. In spite of this fact, however, an adequate supply of milk has been furnished at a moderate cost, demanding only occasionally the purchase of a small amount of milk.

Through the generosity of a public-spirited citizen holding land in the neighborhood of the school, 2 acres of land were loaned for the cultivation of wheat and grain. Thirty-eight bushels of wheat were raised, giving a promise of what might be accomplished if this available land could, by purchase, be added to the acreage of the school property.

An interesting and encouraging feature was the formation of an active and energetic alumni association of the graduates of the school since its establishment eleven years ago. This association attends the graduating exercises each year and holds an alumni meeting. Through its class presidents and elective officers it has done much to demonstrate to the pupils and to the community the practical advisability of the rehabilitation of crippled children and their establishment as self-supporting citizens. Such a utilization of the pent-up energies of the crippled can well serve as encouragement to those who are now planning the rehabilitation of crippled soldiers.

The educational efforts of the State Hospital School have proved of unusual efficiency, to such a degree that the school has entirely outgrown its teaching accommodations. It will be desirable in the near future to ask for funds for the construc-

tion of a schoolhouse to meet the demands for the accommodation of the enlarged school.

The trustees, in closing this report, wish to express their sincere thanks to all the officers and employees for their efficient services during the trying year.

We refer to the annual report of the superintendent and treasurer, which is annexed hereto and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.

LEONARD W. ROSS.

ALFRED S. PINKERTON.

WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to present my eleventh annual report of the Massachusetts Hospital School covering the period from Dec. 1, 1917, to Nov. 30, 1918, inclusive.

The usual activities of the institution were materially affected by conditions growing out of the war, and methods, which had come to be regarded as indispensable, were frequently changed or put aside in order that the demands of strenuous times might be met.

Two of the shops were operated upon half time during the summer to enable the tailor and cobbler to work upon land which would otherwise have gone uncultivated on account of the scarcity of farm help. There have been similar interruptions in the work of other departments caused by the inexperience of many new employees and the absence of those who left to enter military service whose positions remain unfilled.

It has taken 166 different individuals to maintain an average of 70.68 employees for the year, or 45 more than were employed for the higher average of 74.59 employees in 1917. While this shows a greater instability of service than ever before, 2.34 rotations of all employees, the record of 39 persons who remained throughout the year with an average of more than six years' uninterrupted service gives exceptional emphasis to the success with which the emergencies have been faced.

Perhaps the most important factor to interrupt the progress of the work for the year has been the epidemic of influenza which was not only prevalent to a serious degree in the school, but also in all parts of the State. Admissions therefore fell below the record of the last two years.

At the beginning of the year there were 282 children, 118 girls and 164 boys. Fifty-seven, 24 girls and 33 boys, were admitted, 2 girls and 6 boys returned from visit of previous

year, making the total number under treatment during the year 347. The greatest number remaining at any one time was 291, the smallest 216, and the daily average 267.01, 5.97 less than the daily average last year. The average admission age was nine years, four months and six days as compared to nine years, one month and fourteen days for 1917.

It is gratifying to note the confidence which parents display by voluntarily placing their children for the early care and training which is so essential to a future life of usefulness.

Since the minimum admission age, which was tentatively fixed at five years, cannot be raised without an equivalent increase in the age at which school instruction could in most cases begin, it would not seem advisable to change the age limit as has been suggested.

It is also of importance to make early provision for adequate surgical and medical treatment, as a review of the disabilities on admission will show. There were 22 cases of surgical tuberculosis; in 11 the disease was in the spine; in 8 the hip joint was involved; and there was an invasion of the knee and ankle joints in 3 others. Twenty-two was also the number for the infantile paralysis group, and as usual among such cases there were many deformities to be corrected and mechanical appliances to be prescribed. There were 3 cases of spastic paralysis, 2 being of congenital and 1 of traumatic origin. Multiple infectious arthritis was present in 2 cases, and the deformities of rickets and malnutrition in 2 others, while there was 1 case each of progressive muscular dystrophy, amputation of leg, congenital deformity of fingers, extensive osteomyelitis, ununited fracture of the leg, and obstetrical paralysis. It is with such children with undeveloped minds in bodies shattered by disease, that our problem of producing industrially efficient citizens begins. While early improvement in physical health is common, it usually takes many months before concentration of mind is possible and many more before specialized training can be profitably undertaken.

The regular life of the school to which newly admitted patients quickly adapt themselves is made as free as possible from the artificial modes of existence. It is found that disregard for over-precision in both work and play is the best method for

the study of personal traits and the education of individual characteristics.

The nativity of the children admitted corresponds substantially with the record of other years. Exclusive of 1 whose birthplace was unknown, 50, or 90— per cent., were born in Massachusetts; 4, or 7+ per cent., were born in other parts of the United States; and 2, or 3+ per cent., were born in foreign countries. The nativity of 8 fathers and 4 mothers was unknown; of the remainder, 13, or 26+ per cent., of the fathers and 15, or 28+ per cent., of the mothers were born in Massachusetts; 8 fathers and 6 mothers were born in other parts of the United States; and 28, or 57+ per cent., of the fathers and 32, or 60+ per cent., of the mothers were foreign born.

Another result of the unusual conditions which caused a decrease of the admissions for the year is also shown by an increase of the number of those who were discharged.

There has been an unusually large demand for the labor of boys trained at the school, — probably because they were not subject to the selective service law and doubtless, in some instances, because of the success of former graduates who had been found to be more efficient than the ones whose places they were selected to fill. Imbued with patriotic motives and influenced by the high scale of wages, some have left their first places of employment to secure less permanent positions in mills and factories engaged in war work. With the closing of the war industries, will they be aided by the growing realization on the part of the people generally of the justice of giving to the physically handicapped an opportunity consistent with capacity for self-support? A few of those more seriously crippled have remained with their first employers, and it is probable that they will continue to hold their positions with the return of sharper competition.

Exclusive of the 16 children who died, the average age of the 71 children who were discharged was fourteen years, twenty-eight days. Twenty-one of them left to become self-supporting, and while it is to be regretted that some of the most promising boys did not remain to accomplish all that seemed desirable for them at the school, it is believed that the experience which they will gain as wage earners will be of value.



The interest in the rehabilitation of war cripples will be stimulated by the example of some of these boys whose efforts are accepted as a matter of course, and many returning soldiers will be encouraged by their record. A boy, so badly crippled by infantile paralysis that he could neither stand nor sit erect without support, had never attended school when admitted three and a half years ago. He completed the prescribed course of study in the grades, became interested in the printing press, was made assistant editor of the school paper and left in May to enter a country newspaper office in which he has learned to operate a linotype machine. His paralysis remains unchanged, but with splints for his legs, a stiff leather corset for his back and a pair of crutches, he can walk on level surfaces. His employer has just reported that he is cheerful, ambitious and proving to be an efficient assistant. A word of appreciation should be sent to the editor who did not hesitate to give this boy his opportunity.

A similar case with paralyzed legs but with back muscles unimpaired is that of a boy of nineteen who considers himself fortunate in being able to walk upon his hands. He was admitted at the age of twelve without previous school instruction. While going through the grades in the class of 1918 his industrial training was directed by the tailor with whom he served a faithful apprenticeship in the practical routine work of the institution. Directly after being discharged in July he found employment in a prosperous tailoring establishment at a substantial wage, and has continued to work without loss of time ever since. While here he was taught to walk with the aid of some simple apparatus and a pair of crutches, but even now when he reaches home at night he still finds it more convenient with his splints removed to fold his legs and walk upon his hands. The class of 1918 turned out another boy who lost both legs in a car accident nearly ten years ago. When discharged in September he found the operation of steam laundry machinery in which he became quite expert under the tuition of our laundryman temporarily less profitable than war time wages in a shop. He has no ambition for things beyond his reach, is fond of work and will be able to support himself in any one of several ways. Another member of the same class



found that the loss of one hand did not prevent him from holding a responsible position in a large wholesale grocery concern directly as the result of the training he received in our store-room. One graduate, who had lost both legs so near his body that artificial legs could not be successfully applied, became skillful in the use of some simple prothetic apparatus and has been employed as an office assistant since his discharge in March.

One boy who left with the school diploma in August has found that the loss of one leg is not a hindrance to his success at the bench of an instrument shop. One boy whose mental processes were too slow to advance beyond our sixth grade has convinced an employer of many men that he is trustworthy and capable as a janitor and watchman although he is permanently paralyzed in one arm and leg.

Among the 14 others who went out to self-support during the year may be found a bookkeeper, telephone operator, weaver, cobbler, chauffeur, mill operative, painter, etc., all of them representing disabilities ordinarily associated with dependency. Of the other discharged cases for the year, 1 left on account of homesickness; 2 were removed by local authorities on account of matters of support; 11 who were admitted for observation were found unsuitable for classification; 11 who went home on visit were not encouraged to return because they were mentally or physically unpromising; 7 were removed against advice, and 18 either recovered or were so much improved that they were discharged to attend public schools in competition with normal children.

Some of the children who were taken home on visit and not returned were undoubtedly held for mercenary reasons. Others may not be able to stand the strain of life in a public school. The need of a field worker to follow up such cases and to keep in touch with graduates who may be in danger of falling into a life of indolence and dependency has become urgent now that we can no longer reach such cases satisfactorily by other means. It is hoped that one of our former nurses, now on leave of absence with the American Expeditionary Forces, may be appointed as visiting nurse for the school upon her return from France.

The educational work in the grades, although interrupted by the influenza epidemic and the substitution of war gardens for a portion of the customary summer schedule, has made satisfactory progress. By a combination of clear-cut fundamental principles of education and a scientific knowledge of the psychology of crippled children, our head teacher, whose report follows, has developed her department to a commendable degree of efficiency.

The number of scholars in our classes this year is about as usual. As we have reached the limit of capacity in most classes, there can be little variation except with enlarged accommodations for the reception of pupils and an increase in the teaching force. Instruction in the standard branches commonly taught in the first eight grades of the public school continues as usual, except that with the increase of America's share in the great war has come a corresponding increase of the time given to the study and appreciation of that always absorbing topic, current history. The interest shown by our pupils in various forms of war work, as well as in the more prosaic demands of domestic thrift, is evidence of their ability to give intelligent attention to the affairs of the outside world.

The class of 1918 is already represented by 8 members doing creditable work in public high schools.

The addition of a music teacher to our resident instructors has enriched the life of the school. Since last June, graded singing classes have been scheduled so that twice weekly all but a few of our pupils receive this teaching. Good results are already very marked. The music teacher also finds time to work individually with many of the more promising pupils and to hold weekly informal "sings" in the cottages and dormitories. On several patriotic occasions, and at Thanksgiving, the sweet and expressive singing has delighted not only our children themselves, but also all who have heard them.

The usual annual exhibit of school work, held in June, proved pleasurable to a large number of visiting friends. It closed in a novel and appropriate way with the class day exercises of 1918, the first class to venture upon this innovation.

The Alumni Association is growing and forming a firmer bond with the school as each year passes. The annual banquet held

on the afternoon of graduation day was attended by 60 happy and apparently prosperous graduates, while many more only by press of business were prevented from attending. After a simple but inviting dinner, the guests were seated by classes at one long table, with the class presidents at the head. A group picture was taken and after an informal hour of good cheer a business meeting was held for the election of officers. The evening was spent witnessing the exercises of 1918, the largest class thus far graduated from the school. Each class tries to make its own program as original and different from others as possible. The class motto of 1918 was "On to Victory," and the theme of the exercises, the ideas and ideals which each of our great wars sought to establish. This ambitious plan was originated by a member of the class who was unusually good both in English and history. He wrote much of the dramatic setting for each of the six scenes presented. The whole scheme called for much class discussion and historical reading, and when produced, assisted by the school band, testified to the patriotism, industry and enthusiasm of the class.

Another noteworthy activity is the publication of a neat and creditable school paper, "The Enterprise." The editor-in-chief and moving spirit in the whole affair is a graduate of the class of 1916, badly handicapped by infantile paralysis affecting his legs, back and arms. He has never been to school anywhere else and has had one year's private tutoring in high school subjects. He became interested in printing at our shop and is now capable of handling his crew and turning out job printing which is well up to that of the average office. The little monthly in its neat gray cover is written entirely by those connected with the school or by their friends. It deals largely with news of local interest. Papers published by high or college preparatory schools are no novelty, but one conducted by an editor and staff handicapped by such limitations and ambitious to attain such excellence is decidedly more unusual. The school has reason to feel pride in the force of character and promise evidenced by this little venture.

The long, hard hours of patriotic labor in the various school gardens have shown a fine spirit in scholars and teachers. Details as to actual products are listed elsewhere in this report.

Much of the time ordinarily spent for research study of orthopedic problems and the perfection of apparatus has been taken up by regular clinics for army surgeons in training under Maj. Robert W. Lovett for military orthopedic service. A great amount of time has also been given over to the examination of registrants under the selective service law. All the meetings of the Medical Advisory Board for District 45, which included the towns of Canton, Stoughton, Walpole, Sharon and Foxborough, were held at the school.

In the absence of so many physicians who enlisted for service with the army, the civilian population was left sadly unprotected and many unusual demands were made upon physicians who were destined to take a civilian part in the war. Upon several occasions medical aid from the school was urgently sought and freely given for the relief of emergencies which arose in the community when other assistance was not available.

Fortunately the general health of the entire institution population continued to be good throughout a greater portion of the year. The epidemic of influenza which appeared in Boston during the latter part of August made its first appearance in the school in the early part of September, when one of the men employees came down with the disease. His symptoms were so mild as were also those of his wife, who became ill two days afterwards, that the disease was not recognized as influenza at the time. Both cases were treated symptomatically and upon general principles were quarantined in their room until they were well enough to return to their work. Subsequent history, however, showed that both had attended public meetings in Boston where they had been in close proximity to people who were coughing and sneezing and who were undoubtedly incipient cases of influenza. Quarantine precautions were observed at the institution when the influenza was known to be present in certain parts of Greater Boston, but about two weeks after the recovery of these two employees a recently employed nurse came down with the disease. She was ill for several days before seeking medical advice for what she regarded as a common cold and during this period probably innocently transmitted the infection to the patients under her charge. She went off duty on September 24, lobular pneu-



monia quickly developed, great prostration followed and she died on September 27. From this time on the disease spread very rapidly throughout the institution. In most cases the onset was so sudden that children who were bright and active in the morning would be found a few hours afterward completely prostrated in the playrooms, corridors and various parts of the wards. Within a period of a few hours more than 60 cases were reported, and during the first week of October there were, including employees, 259 cases.

Ten children and 1 employee died of influenza and in each case with broncho-pneumonia as a complication. The significance of influenza pneumonia as the immediate or primary cause of death is minimized by the contributory or predisposing causes which are worthy of special mention. One girl had a most distressing deformity of the chest, resulting from neglected Pott's disease in early life; 1 boy had been bedridden for years with spina-bifida paralysis; 1 boy with epileptic spastic diplegia had been unable to walk for several years; 3 girls and 2 boys were hopeless infantile paralytics, of whom 3 were confined to wheel chairs and 2 could not walk without splints or crutches; 1 boy, who had been the victim of an explosion which completely destroyed both hands and most of his face, was subject to bronchitis in an aggravated form; 1 boy and 1 girl were very weak from long-standing and very extensive tuberculous invasion of the hip joints. Exclusive of the children in the tuberculous group, who appeared to have an immunity from the infection, most of the cases were very sick indeed. The relatively low mortality rate, 4+ per cent., in weak, paralyzed and deformed children of low resistance may be explained by the great abundance of fresh air it was possible to send through the wards at a comparatively even temperature and to the untiring, self-sacrificing efforts of practically every member of the institution force.

No prophylactic inoculations or therapeutic vaccines were employed. After the first active measures to put the patients in the most favorable condition to carry on the struggle, the treatment was very largely symptomatic. All windows were opened and the steam pipes in the wards kept hot enough to force a rapid current of air upward through the roof even when

all monitor openings were free. Cubicles were formed by stretching wires transversely across the wards for the hanging of sheets between the beds so that one patient could not cough into another's face.

The prompt and effective handling of the situation was made possible only by the response of clerks, teachers, housekeepers and men employees, who actively devoted their attention to the task in hand and worked in close co-operation with one another to save lives. Their faithfulness in service and affection for the children was never doubted, but such steadiness of purpose to keep going even to the point of exhaustion until the crisis had passed could hardly have been expected in the persons unaccustomed to nursing and employed for other branches of work.

Even the constancy of former employees was shown by the return of 5 nurses who were called and hastily left less urgent cases in other States.

The assistance of 3 of the patients' mothers was most acceptable when they generously volunteered without thought of compensation to come as cooks or to assist in any other possible way.

Following the epidemic a great deal of work was required to replace the apparatus which had been removed and without which many patients could not be taken from their beds after their convalescence. Through the kindness of Major Lovett 6 army surgeons with orthopedic training were sent to assist in this work.

A review of the cases at the end of the year shows that 372 different pieces of apparatus were being worn by 171 individuals as follows: 140 crutches, 31 Bradford abduction hip splints, 89 caliper splints, 53 high soles, 1 plaster half shell, 29 plaster jackets, 8 Thomas knee splints, 6 Bradford frames, 4 back braces and 5 plaster of Paris leg splints.

There were 25 cases requiring surgical dressings.

One hundred and twenty-nine X-rays were taken during the year and 224 dental operations performed.

Exclusive of the deaths which occurred as a direct result of the influenza epidemic there were 5 other deaths as follows: post-hemiplegic epilepsy and congenital spastic paralysis, 1;



tuberculous meningitis and tuberculous disease of hip, 1; amyloid disease of liver and tuberculous disease of sacroiliac joints, 1; tuberculous disease of hip with multiple abscesses and amyloid degeneration, 1; tuberculous disease of spine with amyloid degeneration, 1.

Lieut. Lysander S. Kemp, junior assistant physician, was given a leave of absence in May, when he enlisted for orthopedic service in the medical department of the army. After a brief period as transport surgeon he was assigned to base hospital duty and is now stationed in France.

Miss Marion M. Brown, who succeeded Miss Gertrude V. Eastman as head nurse upon the latter's departure for France with Base Hospital No. 6, promptly responded to the urgent call for nurses at Fort Sam Houston in December. She is now with the colors in France.

Miss Edith C. Wilde resigned in June after two years of most acceptable service as teacher of the intermediate grades to enter another field of labor. Miss Wilde was succeeded by Mr. Charles M. Belknap, a graduate of Dartmouth College in the class of 1916, who in addition to his duties as teacher in the grades has become most successful with the Boy Scouts in his capacity as scoutmaster.

A most valuable addition to the educational department was made in June by the appointment of Miss Flora M. Parcher as teacher of music. Miss Parcher is well qualified in her profession both by reason of her natural ability and long training at the Perkins Institution and the New England Conservatory.

Miss Pauline A. Vanderhoop, for two years a successful teacher of our classes in handcraft, left at the close of the school year to take up post-graduate work, and her successor has not yet been appointed.

Miss Elizabeth M. Harrington, for nearly nine years a most efficient member of our office force, resigned in August to accept an appointment with the War Department in Washington. Miss Beatrice M. Haynes, whose ability was well known from her previous association with the school, was appointed to succeed Miss Harrington as assistant clerk.

Upon every hand the increased cost of living has been apparent, and although the year was closed by the return to the

State Treasurer of an unexpended balance amounting to \$4,-493.33, the shortage of help, the inability to secure delivery of certain supplies until after the close of the fiscal year, and the lowered daily average number of patients were the only factors preventing the deficiency which many times seemed inevitable. The timely appropriation by the Legislature of \$5,500 more than the sum at first allowed provided for the purchase of coal enough to last through the winter and restore the shrinkage in the inventory of 1917.

Maintenance expenses for the year amounted to \$110,006.67, of which \$42,582.06 represents income chiefly for the board of patients and \$71,917.94 the sum received by legislative appropriation. Dividing these sums by 267.01, the daily average number of patients, the weekly per capita cost is found to be \$7.9229 and the net per capita cost to the State, \$4,8561.

The per capita cost of maintenance is not comparable to that of the custodial institutions in which the daily average number of inmates is not materially affected by the temporary periods of absence which frequently occur to interrupt the uniformity of numbers in an institution of children received upon a voluntary basis. No charge has ever been made for the care of a child who is absent from the school overnight even though the cost of maintenance for fuel, light, pay roll, in fact practically every item of expense except that of food, is not lessened by such absence. In the year just closed 155 children made 270 visits which represented 3,231 days' absence from the school.

It has been quite impossible to carry on the ordinary repairs for the year, and improvements under special appropriations have practically remained at a standstill for weeks at a time. The piggery referred to in previous reports was completed during the year as were also the poultry houses made possible by the same appropriation. Twelve portable poultry houses were purchased as they were found to be less expensive than anything our carpenter could erect and because they were particularly well adapted to our needs. They were placed upon 4-inch foundation walls of cement, extending below the frost line and forward, as a retaining wall for the yards which are slightly above the natural grade. Each house is 8 by 8 feet and has a separate yard, so that the individual accomplish-

ments of the boys in the poultry classes can be observed and the houses alternately used for chickens and breeding or laying stock. A very serviceable head house was made from the small building originally designed as a model, from which the advantages of the monitor roof principles of ventilation were demonstrated.

The completion of the poultry houses was the last work to be done under the improvements and equipment appropriation (Resolves of 1916, chapter 119), from which a balance of \$12.44 was returned to the State Treasurer. With the installation of a one-half horsepower electric driven pump in the boiler room for the purpose of forcing water from the town main into the high-pressure tank to supplement the supply pumped from our deep well, and the completion of the connections to the hydrant line previously laid, two other special appropriations were closed, — water supply (Resolves of 1913, chapter 38), with a balance of \$33.94, and water main and fire equipment (Resolves of 1916, chapter 119), with a balance of \$77.72. The brick work and plastering for the east extension to the administration building was finished during the summer by local contractors, who began the work last year. A Boston contractor was engaged to lay the tar and gravel roof, and our resident carpenter has worked at odd times to close the building in for the coming winter, when it is planned to put on the interior finish and get the building ready for occupancy in the spring. Although the work has been frequently interrupted and has been carried on a little at a time by two or three workmen, there is no doubt as to the thoroughness of the work. It now seems probable that the building can be completed within the amount appropriated (Resolves of 1917, chapter 104).

A review of the work carried on under the supervision of the head farmer shows that milk, formerly one of the chief items of expense for food, has been produced at a cost considerably below the market price for milk of an inferior quality. All the promising heifer calves have been raised in preference to the danger of infecting our herd by the purchase of cows in the market. The valuation of our herd was increased \$1,620 during the year, and 50,985+ quarts of milk were produced for home consumption.

The great amount of labor required of men and teams for other than farm work is not generally appreciated. The handling of our annual supply of coal, — now more than 1,200 tons, — the removal of ashes, the delivery of many carloads of freight, the cutting of ice during the winter and its delivery to refrigerators at frequent intervals during the summer, the care of filtration beds and the removal of rubbish from the various buildings are items of expense which are brought out by a careful analysis of farm accounting. The estimated value of the work of horses and oxen for the year was \$796.13 for work strictly pertaining to the farm and \$1,815 for other necessary institution work.

The products of the farm for the year were as follows: 652 bushels of potatoes, 10 bushels of buckwheat, 100 tons of ensilage corn, 150 bushels of field corn,  $34\frac{197}{1000}$  tons of fodder, 38 bushels of wheat,  $2\frac{1}{3}$  boxes of asparagus,  $25\frac{1}{8}$  bushels of string beans,  $37\frac{1}{2}$  bushels dry beans,  $32\frac{1}{4}$  bushels of shell beans, 50 bushels of beets, 28 bushels of beet greens, 132 hundredweight of cabbage, 1 crate of cantaloupes,  $182\frac{1}{2}$  bushels of carrots, 83 boxes of celery, 15 bushels of Swiss chard, 210 bushels of sweet corn, 34 boxes of cucumbers, 56 pecks of small cucumbers for pickles, 52 boxes of lettuce, 135 bushels of onions, 220 bushels of parsnips, 34 bushels of green peas, 5 bushels of red peppers,  $13\frac{1}{2}$  hundredweight of pumpkins, 3 bushels of radishes, 1,288 pounds of rhubarb, 6 barrels of summer squash, 76 hundredweight of winter squash,  $97\frac{1}{2}$  bushels of tomatoes,  $112\frac{2}{3}$  bushels of turnips, 27 watermelons, 1,485 $\frac{1}{2}$  pounds of chicken,  $278\frac{1}{2}$  dozen eggs and 4,723 pounds of pork.

The children's war gardens produced  $10\frac{1}{2}$  bushels of carrots, 7 bushels of Swiss chard,  $1\frac{1}{2}$  bushels of dry beans, 34 bunches of radishes,  $2\frac{1}{2}$  bushels of tomatoes,  $4\frac{1}{3}$  bushels of turnips and 2 bushels of turnip greens. The Boy Scouts produced 272 bushels of potatoes.

Great interest has been displayed by the girls in the sewing classes in the Red Cross work which was carried on in connection with the necessary output of the department. Besides the many pairs of socks, sweaters, mufflers, wristers and surgical dressings made for the local chapter by both patients and employees of the school, the sewing room turned out 158 E. Z.



waists, 24 table cloths, 48 sheets, 24 roller towels, 60 dish towels, 56 hand towels, 242 nightgowns, 1 pair of portières, 1 pair of curtains, 1 State flag, 13 kimonos, 8 cooking caps, 6 pajama suits, 80 dresses, 33 pairs of drawers, 155 pillow slips, 31 aprons, 36 pairs of bloomers, 12 corset covers, 8 dress skirts, 31 petticoats, 5 shirt waists, 7 middy blouses, 5 bureau scarfs, 26 boys' suits, 29 pairs of boys' trousers, 84 boys' blouses, 1 girl's coat, 13 princess slips, 4 knitted washcloths and 18 table napkins.

The band has played on several occasions of local interest and always with great credit to the school. Music was furnished for the Canton High School class day exercises and also for Liberty Loan parades and patriotic rallies.

Through the kindness and generosity of Mr. Abraham Syde-man, all the children able to leave the school enjoyed an afternoon at the local motion picture house, the entire theater being theirs for the afternoon. The children sang several songs for the benefit of their host and at the close each child was presented a box of candy and a personal gift. The children were taken to and from the theater in automobiles contributed by citizens of the town.

Members of the graduating classes were entertained one afternoon at the Wampatuck Farm as the guests of Mrs. Robert Saltonstall.

The crowning event of the year for those who were the fortunate participants was the camping party of the Boy Scouts, made possible through the courtesy of Mr. Augustus Hemenway, who gave them the use of his beautiful camping ground on the shores of Ponkapoag Pond. There for a week the boys enjoyed to the full life in the open, camping in true sportsman-like fashion. Mr. Hemenway's personal visit to the camp and his reception in the log cabin, where stories were told before the big fireplace, was greatly enjoyed and thoroughly appreciated by every scout.

Individual mention of the other friends of the school who have shown their interest in many ways cannot be made within the limits of this report.

Coming to the needs of the institution, special consideration should be given to the question of purchasing additional land

to obviate the necessity of renting pasturage for our cows and the purchase of so much feed. It was undoubtedly the understanding of the Legislature, which passed the appropriation for the erection of the cow barn and the purchase of cows, to make adequate provision for the economical maintenance of a dairy. At that time, however, the urgency for more land was not great, and the exigencies of war have since delayed favorable action upon your request for the land purchase now that it is a practical necessity. Consideration should also be given to the enlargement of our schoolroom facilities, the four rooms originally provided having long since been outgrown by the rapid expansion of our educational activities. The most satisfactory solution of the problem would appear to be the erection of a one-story, four-room, detached school building as soon as the financial policy of the State will justify.

Reference having already been made to the whole-hearted co-operation of those associated with me in the work which you counseled, I wish in behalf of my colleagues to express our thanks for your kind consideration.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*



## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Amputation of leg, . . . . .	—	1	1
Arthritis, infectious, . . . . .	1	—	1
Arthritis, multiple, . . . . .	1	—	1
Congenital deformity of fingers, . . . . .	—	1	1
Osteomyelitis, . . . . .	—	1	1
Paralysis, infantile, . . . . .	14	8	22
Paralysis, obstetrical, . . . . .	—	1	1
Paralysis, spastic, . . . . .	2	—	2
Paralysis, traumatic spastic, . . . . .	1	—	1
Progressive muscular dystrophy, . . . . .	1	—	1
Rachitic deformity, . . . . .	1	1	2
Tuberculous disease of ankle, . . . . .	—	1	1
Tuberculous disease of hip, . . . . .	4	4	8
Tuberculous disease of knee, . . . . .	1	1	2
Tuberculous disease of spine, . . . . .	6	5	11
Ununited fracture, . . . . .	1	—	1
Totals, . . . . .	33	24	57

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	50	13	15
Other New England States, . . . . .	3	6	3
Other States, . . . . .	1	2	3
Total native, . . . . .	54	21	21
Other countries:—			
Austria, . . . . .	—	2	1
Canada, . . . . .	2	6	9
England, . . . . .	—	1	2
France, . . . . .	—	—	1
Germany, . . . . .	—	—	1
Ireland, . . . . .	—	4	4
Italy, . . . . .	—	7	7
Russia, . . . . .	—	5	5
Scotland, . . . . .	—	1	1
Sweden, . . . . .	—	2	1
Total foreign, . . . . .	2	28	32
Unknown, . . . . .	1	8	4
Totals, . . . . .	57	57	57

## VALUATION.

Nov. 30, 1918.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building with added wing and extension under construction, two dormitories and power house, .	168,001 75
Equipment for heat, light and power, . . . . .	7,058 47
Infirmery, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn with silos, . . . . .	3,250 88
Milk house, . . . . .	761 38
Isolation barn and hen house, . . . . .	280 00
Hen houses, . . . . .	863 14
Garage, . . . . .	1,954 01
Piggery, . . . . .	3,005 05
Ice house, . . . . .	904 19
Two isolation houses, . . . . .	501 00
Shop, . . . . .	150 00
Fairbanks scales, . . . . .	745 31
Granolithic walks, . . . . .	3,438 92
Water system, . . . . .	8,597 46
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	391 62
	<hr/>
	\$322,322 69

## PERSONAL PROPERTY.

Travel, transportation, etc., . . . . .	\$4,915 50
Food, . . . . .	8,831 66
Clothing, etc., . . . . .	8,437 54
Furnishings and household supplies, . . . . .	32,272 31
Medical and general care, . . . . .	6,065 34
Heat, light and power, . . . . .	5,623 96
Farm and stable, . . . . .	14,528 38
Grounds, . . . . .	10 95
Repairs, ordinary, . . . . .	5,241 26
	<hr/>
Total, . . . . .	\$85,926 90

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1918:—

### CASH ACCOUNT.

Balance Dec. 1, 1917, . . . . .	\$2,879 12
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### *Receipts.*

#### *Institution Receipts.*

#### Board of inmates:—

Private, . . . . .	\$1,313 83
Cities and towns, . . . . .	32,706 20
Reimbursements, charitable (State minor wards), . . . . .	10,955 76

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\$44,975 79

#### Sales:—

Food, . . . . .	\$108 40
Clothing and materials, . . . . .	57 37
Medical and general care, . . . . .	21 97
Farm and stable:—	
Cows and calves, . . . . .	83 00
Repairs, ordinary, . . . . .	10 12

---

280 86

#### Miscellaneous receipts:—

Interest on bank balances, . . . . .	\$137 49
Sundries, . . . . .	377 36

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514 85

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45,771 50

#### *Receipts from Treasury of Commonwealth.*

#### Maintenance appropriations:—

Balance of 1917, . . . . .	\$2,867 39
Advance money (amount on hand November 30), . . . . .	5,000 00
Approved schedules of 1918, . . . . .	101,278 72

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109,146 11

Special appropriations, . . . . .	6,882 58
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Total, . . . . .	\$164,679 31
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## PAYMENTS.

To treasury of Commonwealth, institution receipts, . . . . .		\$45,771 50
Maintenance appropriations: —		
Balance November schedule, 1917, . . . . .	\$6,296 73	
Eleven months' schedules, 1918, . . . . .	101,278 72	
November advances, . . . . .	3,346 58	
	<hr/>	110,922 03
Special appropriations: —		
Approved schedules, . . . . .	\$6,882 58	
Less advances, last year's report, . . . . .	550 22	
	<hr/>	\$6,332 36
November advances, . . . . .	50 50	
	<hr/>	6,382 86
Balance, Nov. 30, 1918: —		
In bank, . . . . .	\$1,540 21	
In office, . . . . .	62 71	
	<hr/>	1,602 92
		<hr/>
Total, . . . . .		\$164,679 31

## MAINTENANCE.

Appropriation, current year, . . . . .	\$114,500 00
Expenses (as analyzed below), . . . . .	110,006 67
	<hr/>
Balance reverting to treasury of Commonwealth; . . . . .	\$4,493 33

*Analysis of Expenses.*

Salaries, wages: —	
John E. Fish, M.D., superintendent, . . . . .	\$3,500 00
General administration, . . . . .	16,591 50
Medical service, . . . . .	1,716 33
Ward service (male), . . . . .	2,668 05
Ward service (female), . . . . .	10,792 72
Repairs, . . . . .	2,592 32
Farm and stable, . . . . .	3,906 94
Grounds, . . . . .	58 75
	<hr/>
	\$41,826 61
Religious instruction: —	
Catholic, . . . . .	\$480 00
Jewish, . . . . .	470 00
Protestant, . . . . .	481 00
	<hr/>
	1,431 00
Travel, transportation and office expenses: —	
Automobile repairs and supplies, . . . . .	\$1,359 66
Postage, . . . . .	220 68
Printing and binding, . . . . .	221 08
Printing annual report, . . . . .	77 00
Stationery and office supplies, . . . . .	210 38
Telephone and telegraph, . . . . .	416 04
Travel, . . . . .	240 19
Freight, . . . . .	14 74
	<hr/>
	2,759 77
	<hr/>
Amount carried forward, . . . . .	\$46,017 38

*Amount brought forward,* . . . . . \$46,017 38

## Food:—

Butter, . . . . .	\$2,778 77
Butterine, . . . . .	901 66
Beans, . . . . .	135 46
Bread, crackers, etc., . . . . .	187 06
Cereals, rice, meal, etc., . . . . .	602 50
Cheese, . . . . .	122 84
Eggs, . . . . .	1,682 67
Flour, . . . . .	4,655 50
Fish (fresh, cured and canned), . . . . .	1,264 15
Fruit (fresh), . . . . .	764 88
Fruit (dried and preserved), . . . . .	909 57
Lard and substitutes, . . . . .	510 49
Macaroni and spaghetti, . . . . .	60 00
Meats, . . . . .	5,383 01
Milk (fresh and substitutes), . . . . .	586 31
Molasses and syrups, . . . . .	211 84
Peanut butter, pie filling, etc., . . . . .	125 02
Potatoes, . . . . .	505 85
Seasonings and condiments, . . . . .	335 03
Sugar, . . . . .	716 25
Tea, coffee, cocoa, etc., . . . . .	481 83
Vegetables (fresh), . . . . .	135 93
Vegetables (canned and dried), . . . . .	272 23
Yeast, baking powder, etc., . . . . .	102 68
Sundries, . . . . .	43 58
Freight, . . . . .	296 35

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23,771 46

## Clothing and materials:—

Boots, shoes and rubbers, . . . . .	\$571 10
Clothing (outer), . . . . .	963 17
Clothing (under), . . . . .	351 70
Dry goods for clothing, . . . . .	658 40
Hats and caps, . . . . .	10 64
Leather and shoe findings, . . . . .	440 90
Machinery for manufacturing, . . . . .	13 35
Socks and smallwares, . . . . .	230 22
Sundries, . . . . .	4 50
Freight, . . . . .	13 73

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3,257 71

## Furnishings and household supplies:—

Beds, bedding, etc., . . . . .	\$48 45
Carpets, rugs, etc., . . . . .	20 75
Crockery, glassware, cutlery, etc., . . . . .	399 74
Electric lamps, . . . . .	113 12
Furniture, upholstery, etc., . . . . .	56 55
Kitchen and household wares, . . . . .	647 91
Laundry supplies and materials, . . . . .	1,676 30
Lavatory supplies and disinfectants, . . . . .	155 20
Table linen, paper napkins, towels, etc., . . . . .	375 34
Sundries, . . . . .	29 85
Freight, . . . . .	36 98

---

3,560 19

*Amount carried forward,* . . . . . \$76,606 74



*Amount brought forward,* . . . . . \$76,606 74

Medical and general care: —

Books, periodicals, etc., . . . . .	\$60 84
Entertainments, games, etc., . . . . .	237 23
Funeral expenses, . . . . .	18 00
Gratuities, . . . . .	27 97
Ice and refrigeration, . . . . .	72 82
Laboratory supplies and apparatus, . . . . .	130 06
Manual training supplies, . . . . .	32 80
Medicines (supplies and apparatus), . . . . .	1,901 07
Medical attendance (extra), . . . . .	2 00
School books and supplies, . . . . .	137 06
Tobacco, pipes, matches, . . . . .	9 90
Trunks, handbags, etc., . . . . .	10 58
Water, . . . . .	577 60
Sundries, . . . . .	31 21
Freight, . . . . .	35 87

3,285 01

Heat, light and power: —

Coal, . . . . .	\$15,200 42
Freight on coal and other expenses, . . . . .	2,363 82
Gas, . . . . .	8 25
Oil, . . . . .	43 15
Operating supplies for boilers and engines, . . . . .	456 31
Sundries, . . . . .	23 12
Freight, . . . . .	4 36

18,099 43

Farm and stable: —

Bedding materials, . . . . .	\$5 00
Blacksmithing and supplies, . . . . .	115 55
Carriages, wagons and repairs, . . . . .	9 05
Dairy equipment and supplies, . . . . .	5 78
Fertilizers, . . . . .	799 23
Grain, etc., . . . . .	2,865 88
Hay, . . . . .	2,303 68
Harnesses and repairs, . . . . .	1 95
Horses, . . . . .	550 00
Other live stock, . . . . .	158 00
Labor (not on pay roll), . . . . .	394 50
Rent, . . . . .	115 00
Stable and barn supplies, . . . . .	30 15
Tools, implements, machines, etc., . . . . .	297 36
Trees, vines, seeds, etc., . . . . .	340 74
Sundries, . . . . .	163 15
Freight, . . . . .	48 98

8,204 00

Grounds: —

Fertilizers, . . . . .	\$7 00
Labor (not on pay roll), . . . . .	50 00
Road work and materials, . . . . .	16 00
Tools, implements, machines, etc., . . . . .	45 83
Trees, vines, shrubs, seeds, etc., . . . . .	15 00
Sundries, . . . . .	21 25
Freight, . . . . .	3 68

158 76

*Amount carried forward,* . . . . . \$106,353 94

*Amount brought forward,* . . . . . \$106,353 94

Repairs, ordinary:—

Brick, . . . . .	\$49 77	
Cement, lime, crushed stone, etc., . . . . .	425 78	
Electrical work and supplies, . . . . .	390 02	
Hardware, iron, steel, etc., . . . . .	381 67	
Labor (not on pay roll), . . . . .	420 61	
Lumber, etc. (including finished products), . . . . .	182 42	
Paint, oil, glass, etc., . . . . .	1,098 96	
Plumbing and supplies, . . . . .	62 76	
Roofing and materials, . . . . .	166 55	
Steam fittings and supplies, . . . . .	135 27	
Tents, awnings, etc., . . . . .	24 50	
Tools, machines, etc., . . . . .	50 95	
Boilers, repairs, . . . . .	189 33	
Engines, repairs, . . . . .	10 53	
Sundries, . . . . .	9 40	
Freight, . . . . .	54 21	
		<hr/>
		3,652 73
Total expenses for maintenance, . . . . .		\$110,006 67

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1917, . . . . .		\$13,532 83
Expended during the year (see statement annexed),	\$6,882 58	
Reverting to treasury of Commonwealth, . . . . .	125 42	
		<hr/>
		7,008 00
Balance Nov. 30, 1918, . . . . .		\$6,524 83

RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$1,602 92	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$3,346 58	
Account of special appropriations, . . . . .	50 50	
		<hr/>
	3,397 08	
Due from treasury of Commonwealth from available appropriation account November, 1918, schedule, . . . . .	3,727 95	
		<hr/>
		\$8,727 95

*Liabilities.*

Schedule of November bills, . . . . .	\$8,727 95
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PER CAPITA.

During the year the average number of inmates has been 267.01.

Total cost for maintenance, \$110,006.67.

Equal to a weekly per capita cost of \$7.9229.

Receipt from sales, \$280.86.

Equal to a weekly per capita of \$0.0202.

All other institution receipts, \$45,490.64.

Equal to a weekly per capita of \$3.2763.

*Special Appropriations.*

OBJECT.	Act or Resolve.	Whole Amount.	Expended during Fiscal Year.	Expended to Date.	Balance at End of Year.
Water supply, . . . . .	Res. 1913, chap. 38	\$7,000 00	\$227 98	\$6,966 06	\$33 94 <sup>1</sup>
Wing to administration building, . . . . .	Res. 1916, chap. 119	13,000 00	60 61	12,998 68	1 32 <sup>1</sup>
Improvements and equipment, . . . . .	Res. 1916, chap. 119	11,250 00	199 83	11,237 56	12 44 <sup>1</sup>
Water main and fire equipment, . . . . .	Res. 1916, chap. 119	900 00	65 00	822 28	77 72 <sup>1</sup>
Addition to administration building, . . . . .	Res. 1917, chap. 104	15,000 00	6,329 16	8,475 17	6,524 83
		\$47,150 00	\$6,882 58	\$40,499 75	\$6,524 23

<sup>1</sup> Reverting to treasury of the Commonwealth.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

ALONZO B. COOK,  
*Auditor.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.





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TWELFTH ANNUAL REPORT  
OF  
THE TRUSTEES  
OF THE  
MASSACHUSETTS HOSPITAL SCHOOL  
(FOR THE CARE AND EDUCATION OF THE CRIPPLED AND  
DEFORMED CHILDREN OF THE COMMONWEALTH)  
AT CANTON  
FOR THE  
YEAR ENDING NOVEMBER 30, 1919



BOSTON  
WRIGHT & POTTER PRINTING CO., STATE PRINTERS  
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1920



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APPROVED BY THE  
SUPERVISOR OF ADMINISTRATION.

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# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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### TRUSTEES.

EDWARD H. BRADFORD, M.D., <i>Chairman</i> ,	. . .	BOSTON.
LEONARD W. ROSS, <i>Secretary</i> ,	. . .	BOSTON.
ALFRED S. PINKERTON,	. . .	WORCESTER.
WILLIAM F. FITZGERALD,	. . .	BROOKLINE.
WALTER C. BAYLIES,	. . .	TAUNTON.

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### RESIDENT OFFICERS.

JOHN E. FISH, M.D.,	. . .	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.,	. . .	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.,	. . .	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	. . .	<i>Clerk.</i>
MARION M. BROWN,	. . .	<i>Head Nurse.</i>
ALICE MACADAM,	. . .	<i>Supervisor.</i>
ALEXSANDRAENA RUDLAND,	. . .	<i>Supervisor.</i>
RUTH PARK,	. . .	<i>Head Teacher.</i>
LILLIAN S. SWIMM,	. . .	<i>Housekeeper.</i>
WILLIAM H. COFFIN,	. . .	<i>Engineer.</i>
JESS BLACK,	. . .	<i>Farmer.</i>

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### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.,	. . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.,	. . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
ROBERT SOUTTER, M.D.,	. . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
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JOHN LOVETT MORSE, M.D.,	. . .	<i>Physician, Department of Diseases of Children.</i>
JAMES S. STONE, M.D.,	. . .	<i>Surgeon, Department of General Surgery.</i>



# The Commonwealth of Massachusetts

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

In their annual report the trustees of the Massachusetts Hospital School have the honor to submit herewith the more extended report of the superintendent, to which they invite your attention as it is made a part of their report and the recommendations contained therein are endorsed.

The work of the institution has been successfully carried on through the year within the appropriation made for that purpose, and the trustees are enabled to return a small unexpended balance to the treasury, owing to the impossibility of obtaining the normal complement of assistants, nurses and helpers at reasonable wages.

The difficulties of administration have been many, due in large measure to the general unrest of labor, prevailing high wages, and the advancing cost of all materials required by the school, while the lack of sufficient help has entailed an increase of labor upon those employed in all departments of the institution.

The requisite care, education and training of the children has been adequately maintained through the zeal, arduous endeavor and conscientious effort of those in charge of the various branches of the work.

The trustees desire to record their grateful appreciation of the faithful service rendered.

The health of the pupils has been excellent and the school has been happily free from any recurrence of the alarming epidemic of a year ago.



It has been extremely gratifying to note the progress of a large number of graduates of the school in self-supporting occupations.

The annual gathering of our active alumni association at the school is an inspiration to those charged with the responsibility of their earlier care and training, and the influence of their achievements and evident prosperity permeates the entire institution and inspires the younger pupils, as well as the officers and employees, to greater efforts in the tasks confronting them.

The morale of the pupils remains at a high standard, due, we believe, in large measure to the internal student organizations which tend to develop a right-minded attitude toward the school, its officers and the Commonwealth, whose efforts in their behalf they seem to deeply appreciate in reaching the age of understanding.

The troupe of Boy Scouts and the Camp Fire Girls are especially effective in this work.

For some time the trustees have realized the advisability of undertaking field work outside the institution. They have endeavored to keep in touch not only with our graduates but other children who have been discharged and physically fitted to enter the public schools or the better to enjoy home life, and they acknowledge much assistance through the volunteer friends of the institution in the various communities of the State. We have now reached a point where this field work should be more definitely organized by the appointment of a field worker, whose business it would be to keep a supervision over the physical conditions and surroundings of the graduates and other pupils discharged from the school and to assist in guiding and directing their efforts to guard against overwork or unsanitary environment; thus helping to make permanent the rehabilitation which is carried on among the pupils in the school and prevent danger of a relapse.

The field worker might also aid in determining the prospective pupils throughout the State not yet reached through other channels, remaining uneducated and illiterate on account of lack of foresight and knowledge on the part of parents or guardians of the possibilities available to them.

The course of studies planned at the Massachusetts Hospital

School is that of grammar grade, the students graduating usually at fifteen years of age. This is adequate for the majority of the pupils; but in many cases brighter and progressive children require further instruction than can be given at this school. As at present organized, the provision for older pupils of adolescent age, of both sexes, will present complications and is for many reasons undesirable. The trustees hope to make some arrangement with the excellent Boston School for Crippled Children, where day school sessions may be given in advanced courses to selected graduates of the Hospital School. If such an arrangement can be effected, the larger school of rehabilitation can be helped. This plan is being very carefully considered by the trustees.

The institution is in need of a new school building detached from the dormitories, and there is need of structures and equipment for instruction in horticulture, agriculture and gardening, for which we see an increasing necessity; but owing to the exigencies of the times, it has been thought best to defer recommendations for their erection.

The work of the school is becoming more widely known and there is an ever-increasing number of interested visitors from various parts of the country, representing organizations engaged in social welfare and education of the handicapped.

The trustees again desire to emphasize the need of more land. It was originally thought that milk could be economically purchased; but it was soon recognized that in the feeding of a large number of physically weak children provision should be made for a proper milk supply under the direct control of the institution.

When, by grant of Legislature, a cow barn was erected and a herd of cows purchased, it was also considered essential for the economical production of milk that additional tillage and pasturage land be added to the restricted acreage of the school.

The school has been able to rent land for pasturage upon two different farms during the past three years; but there is great uncertainty of securing even rented pasturage another year.

By raising all the promising heifer calves, it has been possible to maintain a desirable herd without purchasing cows in the open market, and for this young stock, as well as for the

raising of more food for the general herd, it is most urgently recommended that provision be made this year for the purchase of additional land.

Respectfully submitted,

EDWARD H. BRADFORD.

LEONARD W. ROSS.

ALFRED S. PINKERTON.

WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to present my twelfth annual report of the proceedings of the Massachusetts Hospital School for the year ending Nov. 30, 1919.

In my report of last year, reference was made to the constantly changing activities of the institution as a result of conditions growing out of the world war and to the emergency measures adopted to meet the extensive invasion of influenza. While there has been a gradual return toward normal conditions, recovery from the high nervous tension of a year ago has not yet fully taken place.

The securing of an adequate number of persons qualified for work in the various departments and adapted to the care of children has been a serious problem. It has been impossible to meet the rapidly increasing wages paid by commercial concerns, and the institution has not only lost employees whom it ought to have kept, but has been unable to find just the right kind of persons to replace them. The unusual demand for labor and the unprecedented high scale of wages has, however, worked to the advantage of many pupils trained at the school in that it has enabled them to demonstrate their ability in useful and varied occupations.

At no time during the year has there been a full complement of employees, although the average number of 71.34 shows a slight improvement over the 70.68 employees for the preceding year. The rotation of service also shows a slight improvement in that 166 different individuals were employed in 1918 while there were but 159 employees for the somewhat higher daily average number employed during the year just closed. The 1919 estimate for salaries and wages was based upon an average of 86, which explains the unexpended sum of \$4,125.06 from that division of the maintenance appropriation.

Eighty-one children were

#### ADMITTED

during the year, of whom 41 were boys and 40 were girls. One boy having been returned from visit of last year, the number of newly admitted cases was equally divided between the boys and girls, surpassing the record of all previous years when a greater number of boys than girls had been received. Owing to the comparatively large number of boys who took advantage of the opportunities for employment last fall and the depletion of our numbers by the influenza epidemic, we began the year with but 259 cases, and although the admissions equalled those of 1917 and exceeded those of every other year since 1910, the total number under treatment was but 340 as compared to 347 in 1918. The greatest number remaining at any one time was 281 on November 12, the smallest 192 on December 24, and the daily average 256.55.

The average admission age was eight years, ten months as compared with nine years, four months, six days for 1918 and nine years, one month and fourteen days for 1917. Twenty-nine, or 35.80 per cent, of the children admitted were suffering from some form of surgical tuberculosis and 23, or 28.39 per cent, came on account of infantile paralysis.

A study of the admissions since the school was established, including a total of 857 cases, would indicate that there are comparatively few crippled and deformed children mentally qualified for special care and training with a view to future self-support whose disabilities are due to hereditary, congenital or accidental causes. This is contrary to the popular impression; but it is along the lines of prevention of the acquired diseases that a remedy should be sought and when found the problem of the crippled child will be well-nigh solved.

Fifty-nine cases were

#### DISCHARGED,

of whom 34 were boys and 25 were girls. Nineteen of these cases left to become self-supporting; 13 either recovered or were so much improved that they were able to attend public schools in competition with normal children; 15 failed to return from



visits to their parents or were removed against advice; 7 were found to be mentally unpromising; 1 who was destined to progressive physical decline was taken by devoted parents to be made comfortable at home after she had been taught to read and to enjoy other pastimes; 1 who was neither capable of self-support nor of attending a public school was discharged to leave the State, and 3 children died. Death in all three cases was due to amyloid degeneration of the liver and kidneys in patients who had suffered many years from multiple bone abscesses.

Exclusive of the 3 patients who died, it is gratifying to report that 32, or 57.14 per cent, of the children who were discharged will with proper guidance in the community creditably demonstrate the value of the training they have received. The school now has more than 100 successful alumni, and strangely enough the most hopeful progress has been made by graduates who when admitted were generally thought to be doomed to a life of idleness and dependence. One member of the class of 1913 is now entering upon his third year of a very successful college course. He is full of courage and enthusiasm for his work and regards the splints and crutches — which he will always be obliged to wear — merely as an inconvenience. Another young man who cannot walk without the aid of splints and crutches left with the school diploma in 1912 and by the power of patient effort has now advanced to the head of the office force in a large and prosperous commercial establishment.

Of those discharged during the past year one paralyzed girl, who had received no educational advantages previous to her admission eight years ago, has, although confined to a wheel chair, entered upon an advanced course of training at a college preparatory school. Others, who left during the year, measure their success by the liberal wages they are receiving in the regular industries in which they have found an opportunity to make their intelligence and what strength they have of value in some light but necessary work, side by side with machine work and stronger companions.

As a direct result of training received at the school may be mentioned the following trades, which have been followed by the pupils who went out to self-support this year: cook, machinist, printer, seamstress, messenger, clerk, poultryman and



teamster. The average age on discharge was fourteen years, one month.

The nativity of the children admitted corresponds substantially with the record of other years. Sixty-one, or 76 + per cent, were born in Massachusetts; 15, or 19 — per cent, were born in other parts of the United States; and 4, or 5 per cent, were born in foreign countries. The nativity of 8 fathers and 3 mothers was unknown; of the remainder, 12, or 17 + per cent, of the fathers and 28, or 36 — per cent, of the mothers were born in Massachusetts; 13 fathers and 10 mothers were born in other parts of the United States; and 47, or 65 + per cent, of the fathers and 39, or 51 — per cent, of the mothers were foreign born.

The high standard of efficiency of our teaching staff is becoming increasingly more apparent as time goes on and reports come back to us from children trained at the school. I am sure I am expressing the unanimous sentiment of the alumni, especially those who have left the school to continue their education elsewhere, when I attribute a large measure of their success to the patience, skill and judgment of the head teacher, Miss Ruth Park, by whose ability and experience their particular educational needs have been understood and most successfully met. The eagerness with which the pupils have applied themselves to their studies and the complete absence of any necessity for forced discipline is most unusual and praiseworthy. Miss Park's description of

#### THE SCHOOL AND ITS METHODS

is presented herewith.

The children are grouped according to their age or previous education in eight divisions corresponding to the usual eight-grade system, with several subprimary classes. The seventh and eighth grades, in their general trend, partake of the nature of a junior high school, though not specifically so called. The grade teaching in academic subjects is not departmental, but all other instruction is. In treating some salient characteristics of this organization, they fall naturally under three headings, physical, mental and social, and they will be dealt with in that order.

Physical condition determines the admission of all pupils to the school. So whether in or out of the classroom, the aim is to create and maintain conditions favorable to bodily recuperation and restoration. When the classrooms were built, a little over ten years ago, a system of ventilation of the most modern type was installed. Experiment and observation, however, soon demonstrated the lack of value in any artificial system, and the open-window plan is now followed exclusively. Even in the upper grades, where more desk work is required, the pupils come to school dressed as for outdoors. Cool temperatures and fresh air keep glowing in the schoolroom the rosy cheeks gained on the playground. As a result of the insistence upon twenty-four hours of fresh air every day for every child, there is a noticeable gain in physical resistance to disease, in weight, and in general well-being. The lower grade rooms have connecting awning sheltered platforms where classes are held outdoors as long as weather permits. With warm wraps, the outdoor work can be carried on during a great part of the year, even in New England. If provision were made for providing every classroom with access to such space, or for turning a classroom at will into an outdoor room, much of our present school work could be carried on in this manner.

The need of providing for pupils wearing apparatus to remedy physical defects led to the arrangement of classrooms with no fixed seats or desks throughout the school. Adjustable desks and chairs of the usual pattern were easily and inexpensively fitted upon bases which made them movable. These are easily arranged in rows, as is usual in classrooms, can be adjusted to suit the physical need of the pupil, and can be pushed aside or moved out at will. The fact that it is possible to make slight adjustments for comfort has a remarkably good effect upon schoolroom conditions.

Another feature developed at first from the impossibility of subjecting patients under treatment to long-continued strain is the time schedule for classroom work. This ranges from one hour a day in the lowest grades to two hours in the upper ones. This arrangement of hours, begun as a physical necessity, would now be continued even did the physical reason no longer exist. It has been found possible, by intensive study directed to essen-

tials, to fit pupils for vocational work or for further study in the high school, with the amount of academic work given as scheduled above. Pupils discharged recovered usually go on without difficulty in the corresponding grade in the public school. Short hours in the classroom act as an incentive to industry. Where a pupil has a comparatively short time to work on any given subject, he gets the habit of making his efforts count. There is usually little need of any other spur to activity. In many cases the difficulty lies in getting the pupil to leave off studying. Habits wasteful in time or energy are discouraged. Study outside the classroom is allowed, but not required.

It will be seen from what has been said as to time, that the size of classes must be small. Twenty in the upper grades, ten to fifteen in the lower, are as large as classes should ever be allowed to become. With a school day of five or more hours' actual classroom work, one teacher can instruct as many in small groups as she would have in a large grade. The classroom management is much easier, the relation between teacher and pupil much more informal and yet the group is large enough for enthusiastic team work. Dealing with people of any age in a mass, without discrimination as to the infinite personal variations possible to humanity, is dangerous. It was especially an error in some of our educational processes of bygone years, but it seems now happily recognized as such and destined to elimination. As a counteracting tendency in an age when man's mechanical control over natural forces has increased to an extent that threatens to make civilization itself merely mechanical, the recognition of each pupil as an ever-differing individuality is worth extending.

Another feature arising from necessity at the Massachusetts Hospital School is great elasticity in the classification of pupils. Children come from all parts of the State, with varying length and quality of previous schooling, sometimes with no schooling at all. Some cases of those badly handicapped are much retarded from mere lack of opportunity to receive education in the ordinary way. After a suitable time for his adjustment to new surroundings, the child is placed in the division in which his qualifications seem to fit him. The small size of the class permits the teacher to make a close survey of his personal and

mental characteristics. It follows that an intelligent basis can be formed for such assistance as is needed, either to make up work in which he is retarded or to give vocational advice if he is at an age to need it. All study in such small classes is naturally supervised study. The bright pupil is given enough attention to keep him occupied at his own rate, while the one less quick mentally can have personal attention given to his needs.

The treatment of curriculum subjects under such conditions cannot be rigidly formal. Drills and drill periods there must be, but they must be short and to the point. In many subjects individual work can be permitted, the pupil going at his own rate of speed. In fact, the standard required for each individual is the best performance of which he is capable. The pupils soon adjust themselves to this, and being required to do more work than the others is regarded as an honor rather than an imposition.

Promotion is by subjects, and may take place at any time during the year. An effort is made to have the leading pupils of one grade approximate what the ones are doing in the grade next above. Thus the interlocking between grades is close. This is an added incentive to steady work. Children who have been kept back by lack of opportunity, but are keen mentally, often accomplish the work of several grades in one year. A chance to make up lost work, or to receive special help in subjects where deficiency exists, is provided in the summer school after the regular schedule is discontinued.

Much effort is made to relate the classroom work of the pupils with home interests and with current events in the world at large, as well as with the vocational and social life of the school itself. The fact that the pupils have in some cases fewer distractions than they would have if at home, accounts in part for the interest with which they follow outside affairs as portrayed in current magazines and newspapers. In a period like the present, when important historical events occur with unprecedented frequency, it is possible, under a flexible program, to study historical parallels with present conditions and to endeavor to make vivid a geographical survey broadly racial in its treatment. Food regulations in our own country have led to



more intelligent study of food values and of economic laws. Within the last five years the duties and privileges of the citizen have been startlingly apparent and have gained a vivid reality in the eyes of the growing boy or girl.

The whole system of vocational training followed at the school has been styled a modification of the apprenticeship plan. All the girls above the primary grades have regular sewing classes, carefully graded and leading up to a knowledge of dressmaking and the use of foot and power machines. Handcraft work for smaller children is provided for in special classes. At the cottage all the older girls, whose physical condition permits, learn to cook, to act as waitress, to wash and iron their own clothing, and to care for all the rooms of a house. These are general activities required of all. The number of pupils makes a great deal of shoe repairing necessary, and a class is maintained for that work. There is also a small tailoring class. But to receive more differentiated instruction, the pupils work with some employee who is engaged in a specific kind of work, such as the fireman, engineer, farmer, dairyman, gardener, painter, laundryman, carpenter, chauffeur and so on. Pupils learn to handle a telephone switchboard and to operate a typewriter in the office. A printing office does all the school printing, publishes a monthly school magazine and does some good job work for outside customers. This is all under the management of a boy badly handicapped by infantile paralysis. He is a graduate of the class of 1916. In placing the pupil, which is generally done at the completion of the sixth grade or earlier if other conditions warrant, great care is given to the study of his natural qualifications, also to his observed preferences. No barrier is set up to prevent reasonable and desirable changes. Results extending through several years' time would seem to justify continuance of the method.

Many of the social and recreational features of the school are under the supervision of the educational department. Vocal and piano music is provided for by class and individual instruction. A skilled bandmaster from a near-by city gives weekly lessons to a group of boys. The assembly hall is fitted for moving pictures, and has a good-sized stage for dramatic performances. There is a library and reading room which is used

in close connection with school work. Dramatic effort is encouraged among the boys and girls as a valuable educational factor. Class plays are chosen, cast and staged by pupil committees under the supervision of some teacher. A project eagerly worked out is the graduation program, usually consisting of the dramatic presentation of events having school, community or historic significance. The shaping, writing and production of this calls for discussion and participation for months by all the members of the eighth grade.

With a program as outlined above, it will be seen that so far as the classroom is concerned, the problem of discipline is reduced to a minimum. Given good air, comfortable seating, and an incentive to industry, many disciplinary problems tend to disappear entirely. Corporal punishment is, in a school of this character, out of the question. This brings about perforce an anticipation of the day which may be hoped for some time in every school, — the day when any necessity to resort to corporal punishment will be held evidence of defective training in earlier years for either pupil or teacher. Penalties must be as long as transgressions occur, but the better a child's training in early years the more effective will be the penalties which appeal to social or ethical motives. The dawning co-operative tendencies of the adolescent make it possible to depend for discipline very largely upon the organized good sense of the class.

As an aid to awakening the sense of responsibility, many of the older pupils are given a measure of direction over certain activities. The plays have already been mentioned. A troop of Boy Scouts gives valuable training in community service. A Camp Fire organization follows the same aim with the girls. Pupil assistants, under supervision, handle the issuing of library books. For two years the eighth grade has organized with regular meetings for simple practice in parliamentary law. The eighth grade president, with class committees, handles school holiday exercises, receptions for guests, etc. Some older girl leads at musical recitals. Observation of the application of pupil management, with adequate preparatory discussion and explanation, seems to show that results are often much better than under adult control. The policing of grounds, the order in rooms, is very effective when obedience is rendered as a willing



contribution to group loyalty or under the compelling force of a group ideal. When, in the absence of the teacher, a bookkeeping class of twenty carry on a quiet and busy office hour, passing about the room, as business requires, to a pupil cashier or for needed material; when a printing or cobbling class, under a competent pupil assistant, works smoothly while the regular instructor is elsewhere, much is gained by the class and by the individual pupil. The results in permanent material of character for a future citizen in a self-governing nation are superior to those attained under the most perfect routine control with rigid supervision.

Athletics are pursued to an extent that is surprising when the physical difficulties of the pupils are considered. As a great deal of the treatment of cases demands free play in the open air, much time is allowed for this. Swimming, roller-skating, coasting, ice-skating, walking trips and baseball all have their seasonable place. The school baseball team has been especially helpful in developing confidence, enterprise, and capacity for making judgments in many pupils. There is a flourishing alumni association of over a hundred members. The school paper, with its alumni department, helps to cultivate a permanent feeling of interest and participation in the work carried on at school. Class songs and class colors cultivate the spirit of loyalty which is symbolized by the school pin.

The pupils represent, as do the homes from which they come, nearly all the varying racial stocks, creeds and colors found today in Massachusetts. It follows that ample opportunity for the cultivation and application of democratic ideals as presented in the life of every day. The importance of the family is emphasized in every possible way, and the necessity of harmonious adjustment of all our differing racial elements in the community, State and nation is taught by actual observation and co-operation. During the war; Red Cross work, Liberty Bond and War Saving Stamp selling, and the cultivation of the "war gardens" all developed in a practical way the thought represented by the stars on the school service flag.

The crops of the year and other products of

### THE FARM

show a substantial increase over the record of previous years, which might be expected as the fertility of the soil has been improved and its adaptability to certain crops determined by experience, although the scarcity of labor in this department throughout the year has been a serious handicap.

The valuation of garden products, as prescribed for the purpose of comparative analysis with other institutions, shows a loss of \$82.67, which may be explained by the low prices estimated in some instances and to the probable errors in recording the delivery of many summer vegetables, which, on account of the shortage of labor, it was necessary to gather at night and prepare for immediate consumption when the storeroom and offices were closed. Five acres were under cultivation for garden crops and the following production recorded:  $5\frac{1}{2}$  boxes of asparagus, 28 bushels of string beans,  $1\frac{1}{3}$  bushels of dry beans,  $19\frac{1}{2}$  bushels of shell beans,  $85\frac{1}{2}$  bushels of beets, 9 bushels of beet greens,  $53\frac{1}{5}$  hundredweight of cabbage,  $86\frac{2}{5}$  bushels of carrots,  $1\frac{1}{3}$  bushels of cauliflower,  $19\frac{1}{2}$  bushels of Swiss chard,  $210\frac{1}{2}$  bushels of sweet corn; 39 boxes of cucumbers,  $110\frac{1}{2}$  pecks of small cucumbers for pickles,  $2\frac{1}{4}$  barrels of egg plant,  $48\frac{1}{6}$  boxes of lettuce,  $60\frac{9}{14}$  bushels of onions,  $53\frac{1}{6}$  bushels of parsnips,  $10\frac{7}{8}$  bushels of green peas,  $9\frac{1}{5}$  bushels of peppers,  $4\frac{2}{3}$  hundredweight of pumpkins,  $\frac{2}{15}$  bushel of radish, 240 pounds of rhubarb,  $13\frac{1}{2}$  barrels of summer squash,  $14\frac{7}{100}$  hundredweight of winter squash,  $35\frac{5}{8}$  bushels of tomatoes and  $78\frac{1}{11}$  bushels of turnips.

As a result of rainy weather it was impossible to dig the potatoes before many bushels of the anticipated crop had rotted in the ground. However,  $200\frac{3}{4}$  bushels were raised and at the estimated value of \$1.50 and \$2.25 per bushel a net gain of \$34.43 was made. Two acres planted to field corn resulted in a gain of \$123.44 at an estimated value of \$1.65 per bushel. Ensilage corn was valued at \$6.50 per ton and 175 tons were produced, showing a net gain over the cost of production of \$428.60. Cow peas, oats, rye, barley and millet were raised for green feed and for soil improvement at a net gain, for feed alone, of \$53.47. Three and six-tenths tons of mangel wurzels

were produced upon one-quarter of an acre and at the estimated value of \$6.50 per ton showed a loss of \$5.88. One dollar and twenty-nine cents was the loss recorded upon 2 acres of fodder corn, which was cut each day during the season and delivered in small cartloads to the cows. Four hundred and twenty-three quarts of strawberries at an estimated price of 20 cents per quart showed a net gain of \$84.60.

A summary of the work of the horses and oxen for the year, after a careful analysis of costs and credits and a shrinkage of \$100 in the inventory due to the death of one of the oxen, showed a net gain of \$1,786.12. The valuation of swine increased from \$1,565 at the beginning of the year to \$3,350 at the end of the year, and the net gain, including interest on the investment at  $3\frac{1}{2}$  per cent, was \$1,845.28. Two thousand four hundred two and five-twelfths dozens of eggs were produced and  $936\frac{1}{4}$  pounds of chicken dressed, showing a net gain for the poultry of \$46.33.

The dairy and milk production chart shows an increase of \$389 in the inventory. Sixty-seven thousand three hundred one and two-tenths quarts of milk were produced at an estimated value of 9 cents per quart and the net gain for the dairy, after considering all costs and credits including interest on investment, was found to be \$432.48. The farm statement of profit and loss, as prepared for the State Auditor, shows a net gain for the year of \$5,002.64.

#### REPAIRS AND IMPROVEMENTS

have practically remained at a standstill during the past two years and with the return to better labor conditions it is hoped that it will be possible to restore the property to the standard which it is desirable to maintain. The interest of the resident carpenter, engineer and painter, and the pride which good mechanics take in their work, has made it possible for these men to bring the east extension to the administration building to a highly satisfactory state of completion. The work has been carried on at odd hours with comparatively little assistance, and we now have adequate dining-room accommodations for our employees.

The dimensions of the east extension correspond to those of the west wing which was described in my report for the year 1917. The first floor is laid in 8 by 8 inch red quarry tile and is divided into an entrance corridor for the nurses, a wash room for men employees and a dining room, which, by the use of accordion doors, can be divided into two compartments with a separate serving room. The second story has a hall connecting with the corridor of the main administration building and on either side of which there are seven bedrooms and a bathroom for employees. The room originally used as an employees' dining room in the main administration building has been remodeled for use as a bakery. A 7 by 9 foot brick oven has been installed and a ceramic tile floor laid. With the expenditure of the small balance of the \$15,000 appropriation of chapter 104 of the Resolves of 1917, for some minor work to be done, another special appropriation will be brought to a close within the sum available, although appropriated at a time when the cost of labor and materials was much lower and was then said by contractors, who submitted bids for the work, to be entirely inadequate.

The work connected with the medical and nursing service was of necessity most trying until the burden was lightened in September and July by Dr. L. S. Kemp, assistant physician, and Miss Marion Brown, head nurse. These highly efficient members of the staff had been on leave of absence for many months for military service overseas, and the one remaining physician, Dr. Daniels, and the two supervisors, Miss MacAdam and Miss Rudland, were obliged to work long days and many nights to keep up with the work.

As an index to the great amount of special care which our sick and helpless children demand, it may be mentioned that there were at one time 40 children who required daily surgical dressings, 15 who were confined to wheel chairs, 102 with splints to be adjusted, 38 who were in plaster casts, and 107 wearing crutches. There have also been the routine physical examinations and treatment demanded by the bed patients at the infirmary.



## INCOME

for the year amounted to \$51,538.87, which was greater than that for any preceding period, and the expenditures for maintenance totaled \$113,988.91, representing a weekly per capita cost of \$8.5445. In considering the per capita cost based upon the daily average number of 256.55, it should be borne in mind that 307 home visits were made representing 3,382 days' absence.

In addition to the clerical demands which these items entail, there is an ever-increasing call for reports and schedules of various kinds from boards and commissions. No increase has been made to the office force, however, and the experienced assistants in charge, although somewhat overworked, have most creditably completed the tasks assigned. The following changes have taken place in the official family.

Mrs. Dorothy B. Kemp resigned in August after a most creditable service of seven years. The office vacancy thus caused was filled by the promotion of Mrs. Beatrice Guild, and Miss Myrtle Welch was transferred from the ward service to succeed Mrs. Guild.

Miss Katherine C. Bowler, a graduate of the Farmington, Maine, Normal School, was appointed to the teaching staff to succeed Mr. Charles M. Belknap, who resigned in September to accept the superintendency of the Industrial School for Crippled and Deformed Children in Boston.

Miss Wilma Sturtevant, another graduate of the Farmington, Maine, Normal School, was assigned to direct the classes in handicraft at the beginning of the school year in September, and Miss Marion E. Swimm, an efficient employee of several years, was made teacher of sewing to succeed Miss Gertrude Pauline Gordon, who resigned to teach in the Boston schools.

Plans for a school building, which has become a necessity, should be made this year and provision for its erection recommended in 1921.

I must again refer to the increasing need for more land, which should be especially emphasized this year because of the great uncertainty of securing rented pasturage another year, and recommend that the request for an appropriation of \$15,000 for the purpose be renewed.

The limits of an annual report will not permit a detailed enumeration of hundreds of friends whose kind interest has been reflected in many ways, — a theatre party and favors for all through the generosity of Mr. Sydman, for which automobile transportation was provided by townspeople; Mrs. Hemenway's bird prizes and automobile rides to the Franklin Park Zoo; and countless gifts at Christmas time from individuals and various church organizations; all testify to the friendly spirit and good will of the people of Canton and neighboring towns.

Grateful acknowledgment is due the trustees for the helpful counsel and advice which have been our chief encouragement to meet the many difficult problems which have been presented.

Respectfully submitted,

JOHN E. FISH,  
*Superintendent.*



## TERMS OF ADMISSION.

---

Crippled and deformed children of the Commonwealth between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about one-eighth of a mile from the Blue Hill Street Railway and one and one-half miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Amputation of leg, . . . . .	1	—	1
Arthritis infectious, . . . . .	—	2	2
Congenital club foot (double), . . . . .	1	—	1
Congenital dislocation of hip, . . . . .	1	1	2
Hysterical hip, . . . . .	—	1	1
Osteomyelitis, . . . . .	1	3	4
Osteomyelitis of elbow, . . . . .	1	—	1
Paralysis, infantile, . . . . .	12	11	23
Paralysis, spastic, . . . . .	2	4	6
Paralysis, traumatic spastic, . . . . .	1	—	1
Progressive muscular dystrophy, . . . . .	2	1	3
Rachitic deformity, . . . . .	2	3	5
Scoliosis, cerebral, . . . . .	—	1	1
Tuberculous disease of hip, . . . . .	10	4	14
Tuberculous disease of knee, . . . . .	2	1	3
Tuberculous disease of spine, . . . . .	4	8	12
Totals, . . . . .	40	40	80

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . . .	61	12	28
Other New England States, . . . . .	4	6	4
Other States, . . . . .	11	7	6
Total native, . . . . .	76	25	38
Other countries:—			
Armenia, . . . . .	—	1	—
Austria, . . . . .	1	2	2
Canada, . . . . .	—	12	9
England, . . . . .	—	2	2
France, . . . . .	—	1	1
Ireland, . . . . .	—	4	3
Italy, . . . . .	1	9	8
Lithuania, . . . . .	—	2	1
Poland, . . . . .	1	4	5
Portugal, . . . . .	—	2	2
Russia, . . . . .	1	7	6
Scotland, . . . . .	—	1	—
Total foreign, . . . . .	4	47	39
Unknown, . . . . .	—	8	3
Totals, . . . . .	80	80	80

## VALUATION.

Nov. 30, 1919.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building with added wing and extension under construction, two dormitories and power house, .	173,956 54
Equipment for heat, light and power, . . . . .	7,058 47
Infirmery, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn with silos, . . . . .	3,250 88
Milk house, . . . . .	761 38
Isolation barn and henhouse, . . . . .	280 00
Henhouses, . . . . .	863 14
Garage, . . . . .	1,954 01
Piggery, . . . . .	3,005 05
Ice house, . . . . .	904 19
Two isolation houses, . . . . .	501 00
Shop, . . . . .	150 00
Fairbanks scales, . . . . .	745 31
Granolithic walks, . . . . .	3,438 92
Water system, . . . . .	8,597 46
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	391 62

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 \$328,277 48

## PERSONAL PROPERTY.

Travel, transportation and office expenses, . . . . .	\$5,057 46
Food, . . . . .	4,952 98
Clothing and materials, . . . . .	8,561 57
Furnishings and household supplies, . . . . .	33,903 60
Medical and general care, . . . . .	6,695 64
Heat, light and power, . . . . .	6,764 63
Farm and stable, . . . . .	17,953 54
Grounds, . . . . .	10 95
Repairs, ordinary, . . . . .	5,534 58

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 Total, . . . . . \$89,434 95

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1919: —

### CASH ACCOUNT.

Balance Dec. 1, 1918, . . . . .	\$1,602 92
---------------------------------	------------

### *Receipts.*

#### *Institution Receipts.*

#### Board of inmates: —

Private, . . . . .	\$1,216 69	
Cities and towns, . . . . .	38,901 23	
Reimbursements, charitable (State minor wards), . . . . .	10,630 88	
		\$50,748 80

#### Sales: —

Clothing and materials, . . . . .	\$85 99	
Medical and general care, . . . . .	14 38	
Farm and stable: —		
Cows and calves, . . . \$103 00		
Hides, . . . . . 31 63		
	134 63	
Repairs, ordinary, . . . . .	10 84	
		245 84

#### Miscellaneous receipts: —

Interest on bank balances, . . . . .	\$172 64	
Sundries, . . . . .	371 59	
		544 23
		51,538 87

#### *Receipts from Treasury of Commonwealth.*

#### Maintenance appropriations: —

Balance of 1918, . . . . .	\$3,727 95	
Advance money (amount on hand November 30), . . . . .	5,000 00	
Approved schedules of 1919, . . . \$104,930 32		
Less returned, . . . . . 8 06		
	104,922 26	
		113,650 21
Special appropriations, . . . . .		6,290 71
		\$173,082 71
Total, . . . . .		

*Payments.*

To treasury of Commonwealth, institution receipts, . . . .		\$51,538 87	
Maintenance appropriations: —			
Balance November schedule, 1918, . . . .	\$5,381 37		
Eleven months' schedules, 1919, . . . .	104,922 26		
November advances, . . . .	3,886 93		
			<u>114,190 56</u>
Special appropriations: —			
Approved schedules, . . . .	\$6,290 71		
Less advances, last year's report, . . . .	50 50		
		\$6,240 21	
November advances, . . . .		106 95	
			<u>6,347 16</u>
Balance, Nov. 30, 1919: —			
In bank, . . . .		\$937 13	
In office, . . . .		68 99	
			<u>1,006 12</u>
Total, . . . .			<u>\$173,082 71</u>

*MAINTENANCE.*

Appropriation, current year, . . . .	\$120,640 00
Balance from previous year, brought forward, . . . .	9 71
	<u>\$120,649 71</u>
Total, . . . .	\$120,649 71
Expenses (as analyzed below), . . . .	<u>113,988 91</u>
Balance reverting to treasury of Commonwealth, . . . .	\$6,660 80

*Analysis of Expenses.*

Personal services: —	
John E. Fish, M.D., superintendent, . . . .	\$3,500 00
Medical, . . . .	2,270 00
Administration, . . . .	3,360 14
Kitchen and dining-room service, . . . .	3,701 58
Domestic, . . . .	5,814 79
Ward service (male), . . . .	962 21
Ward service (female) (less \$8.06 returned), . . . .	9,412 87
Industrial and educational department, . . . .	5,978 79
Engineering department, . . . .	5,368 35
Repairs, . . . .	2,318 02
Farm, . . . .	3,042 89
Stable, garage and grounds, . . . .	2,145 30
	<u>\$47,874 94</u>
Religious instruction: —	
Catholic, . . . .	\$530 00
Hebrew, . . . .	520 00
Protestant, . . . .	534 00
	<u>1,584 00</u>
Amount carried forward, . . . .	<u>\$49,458 94</u>

<i>Amount brought forward,</i>		\$49,458 94
<b>Travel, transportation and office expenses:—</b>		
Advertising,	\$11 59	
Automobile repairs and supplies,	2,608 39	
Postage,	255 94	
Printing and binding,	305 38	
Printing annual report,	71 40	
Stationery and office supplies,	444 69	
Telephone and telegraph,	381 79	
Travel,	291 46	
Freight,	22 41	
		4,393 05
<b>Food:—</b>		
Cereals, rice, meal, etc.,	\$58 36	
Bread, crackers, etc.,	2,442 22	
Peas and beans (canned and dried),	50 79	
Macaroni and spaghetti,	19 49	
Potatoes,	928 65	
Meat,	5,766 43	
Fish (fresh, cured and canned),	884 34	
Butter,	4,169 38	
Butterine, etc.,	535 75	
Peanut butter,	243 82	
Cheese,	117 20	
Coffee,	49 50	
Coffee substitutes,	278 51	
Cocoa,	56 56	
Milk (whole),	126 50	
Milk (condensed, evaporated, etc.),	3 96	
Eggs (fresh),	632 58	
Sugar (cane),	1,266 69	
Fruit (fresh),	813 74	
Fruit (dried and preserved),	579 50	
Lard and substitutes,	466 20	
Molasses and syrups,	110 66	
Vegetables (fresh),	79 85	
Vegetables (canned and dried),	118 99	
Seasonings and condiments,	322 78	
Yeast, baking powder, etc.,	228 68	
Sundry foods,	81 50	
Freight,	344 93	
		20,777 56
<b>Clothing and materials:—</b>		
Boots, shoes and rubbers,	\$1,419 49	
Clothing (outer),	1,023 53	
Clothing (under),	30 70	
Dry goods for clothing,	366 16	
Hats and caps,	17 83	
Leather and shoe findings,	381 02	
Socks and smallwares,	411 76	
Sundries,	16 79	
Freight,	20 09	
		3,687 37
<i>Amount carried forward,</i>		\$78,316 92



*Amount brought forward,* . . . . . \$78,316 92

Furnishings and household supplies:—

Beds, bedding, etc., . . . . .	\$958 49
Carpets, rugs, etc., . . . . .	263 03
Crockery, glassware, cutlery, etc., . . . . .	225 34
Dry goods and smallwares, . . . . .	6 12
Electric lamps, . . . . .	60 59
Fire hose and extinguishers, . . . . .	10 07
Furniture, upholstery, etc., . . . . .	235 10
Kitchen and household wares, . . . . .	663 55
Laundry supplies and materials, . . . . .	741 04
Lavatory supplies and disinfectants, . . . . .	28 00
Table linen, paper napkins, towels, etc., . . . . .	21 05
Sundries, . . . . .	19 88
Freight, . . . . .	32 45

3,264 71

Medical and general care:—

Books, periodicals, etc., . . . . .	\$141 73
Entertainments, games, etc., . . . . .	291 97
Gratuities, . . . . .	25 00
Ice and refrigeration, . . . . .	400 31
Laboratory supplies and apparatus, . . . . .	139 29
Manual training supplies, . . . . .	57 61
Medicines (supplies and apparatus), . . . . .	1,598 48
Medical attendance (extra), . . . . .	1 00
Return of runaways, . . . . .	5 00
School books and supplies, . . . . .	247 40
Tobacco, pipes, matches, . . . . .	12 57
Water, . . . . .	623 88
Sundries, . . . . .	64 92
Freight, . . . . .	40 05

3,649 21

Heat, light and power:—

Coal (bituminous), . . . . .	\$4,996 33
Freight and cartage, . . . . .	5,260 50
Coal (anthracite), . . . . .	297 75
Freight and cartage, . . . . .	158 85
Gas, . . . . .	5 28
Oil, . . . . .	89 21
Operating supplies for boilers and engines, . . . . .	65 09
Freight, . . . . .	8 00

10,881 01

Farm and stable:—

Bedding materials, . . . . .	\$339 60
Blacksmithing and supplies, . . . . .	165 17
Carriages, wagons and repairs, . . . . .	33 00
Dairy equipment and supplies, . . . . .	37 10
Fencing materials, . . . . .	99 88
Fertilizers, . . . . .	176 32
Grain, etc., . . . . .	7,285 42
Hay, . . . . .	3,751 10
Harnesses and repairs, . . . . .	46 70
Other live stock, . . . . .	176 40

*Amounts carried forward,* . . . . . \$12,110 69 \$96,111 85

Amounts brought forward, . . . . . \$12,110 69 \$96,111 85

Farm and stable — *Continued.*

Labor (not on pay roll), . . . . .	296 00	
Rent, . . . . .	115 00	
Road work and materials, . . . . .	245 00	
Stable and barn supplies, . . . . .	120 73	
Tools, implements, machines, etc., . . . . .	289 06	
Trees, vines, seeds, etc., . . . . .	296 29	
Freight, . . . . .	261 44	
		13,734 21

Grounds: —

Labor (not on pay roll), . . . . .	\$17 00	
Road work and materials, . . . . .	168 10	
Trees, vines, shrubs, seeds, etc., . . . . .	15 00	
		200 10

Repairs, ordinary: —

Brick, . . . . .	\$42 49	
Cement, lime, crushed stone, etc., . . . . .	41 45	
Electrical work and supplies, . . . . .	74 03	
Hardware, iron, steel, etc., . . . . .	336 39	
Labor (not on pay roll), . . . . .	373 33	
Lumber, etc. (including finished products), . . . . .	319 02	
Paint, oil, glass, etc., . . . . .	801 98	
Plumbing and supplies, . . . . .	417 40	
Roofing and materials, . . . . .	234 09	
Steam fittings and supplies, . . . . .	597 35	
Tools, machines, etc., . . . . .	289 94	
Boilers, repairs, . . . . .	74 88	
Sundries, . . . . .	255 25	
Freight, . . . . .	85 15	
		3,942 75

Total expenses for maintenance, . . . . . \$113,988 91

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1918, . . . . .	\$6,524 83
Appropriations for fiscal year, . . . . .	—
Total, . . . . .	\$6,524 83
Expended during the year (see statement below), . . . . .	6,290 71
Balance Nov. 30, 1919, . . . . .	\$234 12

OBJECT.	Act or Resolve.	Whole Amount.	Ex- pended during Fiscal Year.	Ex- pended to Date.	Balance at End of Year.
Addition to administration building.	Chapter 104, Resolves of 1917.	\$15,000 00	\$6,290 71	\$14,765 88	\$234 12

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$1,006 12	
November cash vouchers (paid from advance money):—		
Account of maintenance, . . . . .	\$3,886 93	
Account of special appropriations, . . . . .	106 95	
	<hr/>	3,993 88
Due from treasury of Commonwealth from available appropriation account November, 1919, schedule, . . . . .	4,066 65	
	<hr/>	\$9,066 65

*Liabilities.*

Schedule of November bills, . . . . .	\$9,066 65
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## PER CAPITA.

During the year the average number of inmates has been 256.55.

Total cost for maintenance, \$113,988.91.

Equal to a weekly per capita cost of \$8.5445.

Receipt from sales, \$245.84.

Equal to a weekly per capita of \$0.0184.

All other institution receipts, \$51,293.03.

Equal to a weekly per capita of \$3.8448.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK,  
*Auditor.*





The Commonwealth of Massachusetts

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ANNUAL REPORT

OF THE

TRUSTEES OF THE MASSACHUSETTS  
HOSPITAL SCHOOL

FOR THE

YEAR ENDING NOVEMBER 30, 1920

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DEPARTMENT OF PUBLIC WELFARE



BOSTON

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# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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### TRUSTEES.

EDWARD H. BRADFORD, M.D., <i>Chairman</i> ,	. . . . .	BOSTON.
LEONARD W. ROSS, <i>Secretary</i> ,	. . . . .	BOSTON.
ALFRED S. PINKERTON,	. . . . .	WORCESTER.
WILLIAM F. FITZGERALD,	. . . . .	BROOKLINE.
WALTER C. BAYLIES,	. . . . .	TAUNTON.

---

### RESIDENT OFFICERS.

JOHN E. FISH, M.D.,	. . . . .	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.,	. . . . .	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.,	. . . . .	<i>Assistant Physician.</i>
MARY W. WENTWORTH,	. . . . .	<i>Clerk.</i>
MARION M. BROWN,	. . . . .	<i>Head Nurse.</i>
ALICE B. MacADAM,	. . . . .	<i>Supervising Nurse.</i>
ALEXSANDRAENA RUDLAND,	. . . . .	<i>Supervising Nurse.</i>
RUTH PARK,	. . . . .	<i>Head Teacher.</i>
ADA N. SPAULDING,	. . . . .	<i>Housekeeper.</i>
WILLIAM H. COFFIN,	. . . . .	<i>Engineer.</i>
JESS BLACK,	. . . . .	<i>Farmer.</i>

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### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.,	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.,	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
ROBERT SOUTTER, M.D.,	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
JAMES W. SEVER, M.D.,	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
ARTHUR T. LEGG, M.D.,	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
JOHN LOVETT MORSE, M.D.,	. . . . .	<i>Physician, Department of Diseases of Children.</i>
JAMES S. STONE, M.D.,	. . . . .	<i>Surgeon, Department of General Surgery.</i>



# The Commonwealth of Massachusetts

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

In presenting their annual report, the Board of Trustees wish to emphasize the institution's need of a more suitable school building. When the original plans for the Massachusetts Hospital School were framed it was impossible to determine the amount and character of the schooling which would be suitable for such pupils as would be received at the school, there being ascertainable no facts on which a definite opinion could be based. It was thought that the physical condition of cripples would prevent substantial mental efforts. It seemed, therefore, prudent to avoid any extensive outlay for school accommodations, paying special attention to the needs for the development of the physical condition of the children. Experience of the last ten years has shown that the pupils of the school, partly owing to the excellent health conditions which they enjoy, and partly to the well-planned system of short time and intensive instruction in small classes which have been arranged, compare surprisingly well in their school work with the physically unhandicapped. It seems, therefore, desirable that more attention should be paid to the necessity for the best possible school equipment as an aid to the mental development of a surprisingly promising class of pupils, and certainly a most deserving class, which for its success in the community must rely on mental intelligence and self-reliant, well-trained character more than upon physical ability.

The success of the institution in developing and educating handicapped children has prompted the Board of Trustees to consider carefully the plans for the new infirmary for the State



minor wards which the Board has been directed to construct and administer under the Acts of 1920, chapter 597.

The trustees regard it for the best interest of the pupils of the Massachusetts Hospital School that the two institutions, viz., the Hospital School and the New Hospital for State Minor Wards, be as completely separate organizations as is compatible with economic administration.

The adjacent land, on which the new hospital buildings are to be placed, can be so utilized that the pupils of the Hospital School can have no contact or association with the patients of the new infirmary. As many of these may be convalescent from infectious diseases, complete separation of both groups of children is desirable. At the same time, it will be possible to use the same heating power and electrical plant, laundry, food supply, storehouses, milk and farm products, increasing also farm area for pasturage and garden purposes. The administrative and clerical officers can also serve for both.

The Board has been carefully considering suitable constructive plans which will provide for the growth of the new hospital with as little duplication and waste of unnecessary construction as possible, and suggests the erection with the amount of money granted, as an initial outlay, of two small wards to meet the immediate demand for such State minor wards as are in special need of proper accommodation. The Board has consulted the Commissioner of the Department of Public Welfare as to the class and number of patients who will be likely to require hospital care.

There is no doubt of the demand for adequate provision for many cases which may in the end be made pecuniarily an economic saving to the State, besides providing more thorough care for the dependent and sick children than is in some instances at present possible.

It is planned to begin construction as soon as a survey of the land, now in progress, is completed. A large portion of the land has been generously granted to State purchase by the owner, but some delay has been unavoidable because of the difficulty of obtaining clear titles to some of the land needed, as the holdings date back a number of years.

As is shown by the reports of the superintendent and treas-

urer, which are hereto annexed and made a part of this report, the work of the institution has proceeded satisfactorily in the past year, and it is gratifying to note the increasing interest in the accomplishments of the school, as is shown by the number of visitors from distant parts of the country, as well as from nearer neighborhoods, who are desirous of examining the work of the school and its organization.

Respectfully submitted,

EDWARD H. BRADFORD.

LEONARD W. ROSS.

ALFRED S. PINKERTON.

WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

I have the honor to present my thirteenth annual report of the proceedings of the Massachusetts Hospital School for the year ending Nov. 30, 1920.

The progressive development of the institution to meet the needs of the crippled children of the State was temporarily retarded, especially during the summer months, by the shortage of help and the frequent addition of new employees to replace those who were controlled by erratic impulses to change their environment. At no time during the year has there been a full complement of subordinate helpers, and at times the shortage was a great tax upon the strength of those who did not succumb to the delirious enthusiasm for more pay and less work.

By the employment of 67 men it was possible to maintain an average of 28+, and 124 women were engaged to give an average of 45—, or a total of 191 different individuals were required to maintain an average of 73— employees. However, the loss by such great instability of service was not without its compensations. The sum originally appropriated for the normal number of employees was available for increasing the wages of the deserving and faithful few without the necessity of a deficiency in the item for personal services, and the wisdom of your Board in approving no increases which could not reasonably be maintained is keenly appreciated now that a general decline in wages is elsewhere taking place.

The largest number of children at any one time during the year was 294, the smallest 211, and the daily average number, 274.44, 17.89 more than the average last year. There were at the beginning of the year 280, — 154 boys and 126 girls. Fifty boys and 43 girls were

ADMITTED,

making the total number under treatment 374, one girl returning from visit of last year, exceeding the record for any corresponding period.

The average admission age of eight years eleven months is substantially the same as that of last year, although there is a greater uniformity in the ages of the 294 children now enrolled than has previously been the case.

An occasional application has been received for the admission of a child who had passed the age of fifteen years, but the requests are not numerous enough to justify the establishment of a separate unit for such cases, and it would appear that the importance of providing for the early education of the crippled children of the State is becoming more generally appreciated.

Infantile paralysis and surgical tuberculosis continue to constitute by far the largest number in the list of causes for admission.

By adding the promising cases of rickets and malnutrition, and the deformities which can be corrected by surgical operations, to the recoverable cases of bone tuberculosis, fully one-half of the children received may be properly regarded as temporary cripples.

While the

#### NATIVITY

of those admitted was substantially unchanged from the record of previous years, it is of interest to note that 79, or 85— per cent, were born in Massachusetts; 9, or 10— per cent, were born in other parts of the United States; and 5, or 5+ per cent, were born in foreign countries.

The nativity of 8 fathers and 3 mothers was unknown; of the remainder, 20, or 24— per cent, of the fathers, and 23, or 25+ per cent, of the mothers, were born in Massachusetts; 12 fathers and 16 mothers were born in other parts of the United States; and 53, or 62+ per cent, of the fathers, and 51, or 57— per cent, of the mothers, were foreign born.

Seventy-one children, or 38 boys and 33 girls, were

#### DISCHARGED,

also breaking all previous records and exceeding by 12 the number who left in 1919. Of this number, 15 were found to be either mentally unpromising or so badly handicapped physically that special care and training, with a view to even partial self-support, was beyond the possibility of accomplishment.

When cases of spina bifida paralysis and progressive muscular dystrophy, for example, have been taught to read and to pass the few years they have to live in comparative comfort, they are more appropriately classifiable in private families or in asylum homes. To such cases neither hospital care nor educational opportunities are necessary or practicable.

Three children were discharged to leave the State, and 10, for various reasons, either failed to return from visit or were taken against advice. Some proud parents of limited means find town or city aid objectionable even when not given as pauper relief, and others have fallen under the influence of so-called "healers" and sought "cures" for their children elsewhere. While the number of such cases is comparatively small, it could doubtless be made smaller if certain home visits were not permitted or if children were not received upon a purely voluntary basis. The many advantages of the present policy are obvious, however, when it is considered that the number of home visits as represented by the children who were given temporary leave and who were voluntarily returned during the year amounted to 3,396 days' absence.

Whenever children have been returned to homes thought to be undesirable, it has been customary to inform the local authorities, so that each case might be managed as a community problem, and possibly sent back to the school by the court through the Department of Child Guardianship. One child was discharged as no longer in need of special care and training as a cripple; one girl died of pneumonia while at home on a visit. Fifteen others who left to become self-supporting were either incapable of advancement beyond the eighth grade in school, or for financial reasons felt obliged to go to work as soon as their health would permit. Twenty-six, or 36 per cent, of those who were discharged intended to continue their education in competition with normal children.

Some had completely recovered, while others who had by long training become expert in the use of mechanical aids to locomotion, had come to regard their disabilities as an inconvenience rather than as a handicap impossible to overcome. The average age on discharge was thirteen years and twenty days, which is one of the strongest arguments I can present in support of any



belief that some provision should be made for specialized training in high school branches to enable many of our graduates to become the most successful wage earners.

Nineteen of those who left during the year were awarded the school diploma as evidence of the successful completion of our prescribed course of study, as well as the fact that they were qualified for high school work.

There have been no material changes in

### THE SCHOOL

curriculum or the methods of instruction beyond the endeavor to strengthen the system which experience has found to be desirable. As brevity is said to be one of the chief attributes of a public document, and to avoid repetition, reference is hereby made to the courses of study and the principles of instruction as outlined in my reports for the years 1915 and 1919. At the completion of the school year the head teacher, Miss Ruth Park, to whom the successful development of our school work is in great measure due, was given a leave of absence for specialized study at the Boston University. Mrs. Cora E. Richardson, for several years an able assistant to Miss Park, was temporarily advanced to the head of the teaching staff, and Miss Nora E. Taylor, a highly recommended teacher of experience, was appointed to succeed Mrs. Richardson in charge of the fifth and sixth grades. Miss Laura E. Sherman was appointed as first and subprimary grade teacher to succeed Miss Helen Endicott, who felt obliged to resign after a number of years of faithful and creditable service.

Our classrooms have been taxed to the extreme limit of their capacity throughout the year. Two hundred and sixty-three pupils are now enrolled, with an average of more than 60 for each grade teacher. Two hundred and fifty children are at present receiving instruction in vocal music, and 12 selected pupils are taking piano lessons. Under the efficient leadership of our band master, Mr. Mace Gay, 14 boys give promise of surpassing the school bands which he has heretofore developed.

Our children are learning to know and appreciate good music, a requirement not to be undervalued. Two glee clubs have been formed and several concerts given which would have re-



flected great credit upon older and more advanced pupils. In addition to her regular duties the music teacher has voluntarily organized a Girls' Camp Fire group, which is a very helpful and uplifting factor of the school life. In spite of their crippled condition, the Boy Scouts and Camp Fire Girls have won many honors and rapidly advanced in the ranks of their organizations. Our school has been enrolled as an auxiliary of the Junior Red Cross. The object of this organization is to impress upon the children a sense of their present citizenship, and to train them in the habit of service, which is the basic principle of patriotism. This service may not necessarily take the form of donations to children in far-off lands. Our young people are taught that right living from day to day in cheerful compliance to necessary rules and regulations, and with unselfish consideration for those about them, is most acceptable service to State and country.

The graduating exercises of 1920 were planned to commemorate the landing of the Pilgrims. The class motto was "Liberty with Law," and dramatic scenes from Austin's "Standish of Standish" pictured some of the struggles made for liberty by the founders of America.

On graduation day nearly 100

#### ALUMNI

met at the school for their annual reunion and dinner. The Alumni Association has now become such a large and enthusiastic body that we must set apart a special day for their entertainment.

Happily the general health of the entire institution population has been good throughout the year. The great amount of routine

#### MEDICAL AND SURGICAL

work required has rendered it difficult for the resident staff to take full advantage of the exceptional opportunity for research investigation and study which our large clinic affords. Case histories have been more carefully recorded, and the X-ray and laboratory findings improved, with a view to systematic analysis and investigation when time and a larger staff will permit. One hundred and fifty cases of hip joint disease have been reviewed and some valuable information prepared for publication.

Early in the coming year 1,000 case histories will be available for study. Much time is required for the application and adjustment of hundreds of pieces of mechanical apparatus and to attend to the minor illnesses and accidents which occur in such a large group of physically helpless children. The infirmary wards have been filled to capacity with the newly admitted patients who are entered there for physical examinations, the surgical convalescents, and those advanced paralytics and tuberculous cases inevitably present. Ten cases of accidental fractures have been under treatment, and the following surgical operations performed: —

One double astragalectomy for flail feet due to infantile paralysis; one exploratory operation in plantar aspect of foot for foreign body; two cases of unilateral club foot correction; two cases of unilateral reduction of congenital dislocation of the hip by the closed method; one plastic reamputation of a lower leg stump; one appendectomy; one subcutaneous osteotomy of the tibia for an ununited fracture; and one operation for the removal of a large sequestrum from the thigh in a case of osteomyelitis of long standing.

There were 9 deaths during the year. One promising girl graduate who had completely recovered from the symptoms which led to her coming to the school, and but a few days previous to the time appointed for her discharge to enter a public high school, was accidentally drowned on the shore of Reservoir Pond within a few feet of her nurse, and in the presence of several schoolmates with whom she was bathing. There were 2 deaths from tuberculous meningitis, — one in a case of tuberculous disease of both hip joints, and the other in a case of tuberculous disease of the spine. Other deaths were from the following causes: osteomyelitis, chronic with multiple abscesses, one case; amyloid degeneration of liver and kidneys and tuberculous disease of the spine, one case; multiple abscess formation and tuberculous disease of foot and spine, one case; acute cardiac dilatation and lobar pneumonia and tuberculous disease of the spine, one case; chronic myocarditis and tuberculous disease of the hip and spine, one case; multiple abscesses with amyloid degeneration and tuberculous disease of spine, one case.

With the increased growth of the school and the number seeking admission there has come a demand for better hospital facilities and an improved laboratory equipment. This need can doubtless be satisfactorily met by the erection of the proposed infirmary to provide for the hospital care of sick minor wards, Acts of 1920, chapter 597. While it is desirable that the hospital care of this new group of children should be entirely separate from the present school department for crippled children, certain cases in the latter group can very properly be transferred to the proposed new hospital unit when in need of special surgical or medical attention, without detriment to either the hospital or school departments, and a duplication of equipment and an increased cost of maintenance be thereby avoided. By moving the domestic science cottage from its present foundation about 70 feet to the south in line with the new girls' cottage, an admirable site for the proposed new infirmary can be obtained upon the comparatively level and elevated area southeast of the present group of buildings. The approach to the domestic science cottage could be extended at a minimum cost to the entrance of the new infirmary, which would occupy an isolated situation easily accessible for economy and convenience of administration, and, at the same time, available for comparatively inexpensive connection with the central heating plant, water and sewer mains. With a few simple interior changes the present infirmary could be utilized as a nurses' home.

The purchase of additional land made possible by the Acts of 1920, chapter 384, has been delayed by boundary complications and technicalities in the acquirement of titles, but surveys are now nearing completion, and the Attorney-General expects the land will be available for our use early in the coming year.

A review of the work done in the cobbling shop shows that 202 splints were covered and 182 caliper plates applied; 249 high soles tapped, 97 ankle straps and 28 kneecaps made; 11 pairs of moccasins made; 745 shoes heeled and 973 shoes tapped; 621 shoes were sewed and 117 patches applied besides 458 other individual pieces of shoe repair work.

In addition to marking and distributing thousands of articles which pass through the sewing room, and all the repair work

required, this department has to its credit the following manufactured articles: 171 nightgowns; 113 dresses; 23 underwaists; 57 aprons; 283 blouses; 28 boys' suits; 34 pairs bloomers; 35 negligee shirts; 38 romper suits; 9 petticoats; 6 pajama suits; 6 girls' coats; 7 white coats; 4 pairs pants; 2 brace aprons; 1 flag; 9 pairs overalls; 37 caps; 2 awnings; 132 flannel bandages; 12 pairs sleeping socks; 36 belts; 60 napkins; 259 sheets; 344 hand towels; 419 pillow slips; 144 bath towels; 147 roller towels; 121 draw sheets; 66 dish towels; 41 bureau scarfs; 67 pairs curtains; 72 crib sheets; 39 stand covers; 13 tablecloths; 42 table napkins; 26 tray cloths; 12 rubber sheets; 6 screen covers; 6 bath mats; 6 coffee bags; 8 face cloths; 2 frame covers; and 1 upholstered chair cover.

The sum appropriated for extraordinary

#### REPAIRS

not recurring annually resulted in the replacement of the wooden platforms in front of the east and west dormitory playrooms and the east wing of the latter building by a granolithic surface upon a filled foundation of field stones and gravel at a total cost of \$700. The three horizontal tubular steam boilers, from which considerable heat was lost by radiation, were given a thorough insulation covering of asbestos, and similar protection was applied to boiler tops, steam pipes, valves and flanges not previously covered. New sills were placed under the old stable south of the garage, the building raised 9 inches, and placed upon a new foundation wall. Materials were also purchased for the remodeling of the first story into a recreation center for men employees. This work will be completed during the coming winter, when the carpenters will be unable to do outside work to advantage, and a small appropriation request has been made for the conversion of the hayloft in the second story into bedrooms to be occupied by the men who work upon the farm and grounds. With the establishment of permanent grades and the present certainty as to the location of buildings to be erected in the future, it seems highly desirable that permanent improvements should now be made to the approach to the institution along Randolph Street. Drawings have been prepared for a wall to mark the boundary between the front

lawn and the street, with posts on either side of the two entrances to the administration building. It is estimated that this work can be completed and a granolithic walk laid a distance of about 1,000 feet along Randolph Street at a total cost not to exceed \$1,750. Upon the completion of this plan as a beginning, trees and shrubs could be planted, and the wall extended at comparatively small expense from year to year until the entire northern boundary is substantially and artistically defined. In this way no special appropriation for the purpose would be necessary. It is hoped that this much-needed improvement may be begun another spring under the 1921 maintenance estimate for special purposes.

The outlet pipe to the water tower was repacked by special emergency workmen employed for the purpose, and a new filtration sewer bed was made by our regular farm employees. Two new high-pressure steam cookers were installed in the general kitchen, and a new refrigerator built to replace the ones originally installed for milk and butter. A few emergency repairs have been made at the laundry in anticipation of the extensive changes which will become necessary to provide for the hospital group soon to be established.

Despite the scarcity of help, work upon

### THE FARM

gave results highly creditable to the head farmer, who was frequently left with no other assistance than that of some of the patients. Planting was seriously delayed by our failure to receive the fertilizer which was purchased directly from the manufacturers in combination with other State departments. After waiting until the season was far advanced, fertilizer was finally obtained of a local dealer, and the manufacturers' shipment was stored for use another year.

Five and one-half acres were used for garden vegetables and  $18\frac{1}{2}$  acres for field crops. The estimated cost of producing 63,144 quarts of milk was \$0.1148 per quart. The labor of dairy employees alone was \$441.92 more than was paid last year; and although the cows and heifers were actually worth more to the institution, the valuation of the herd at the be-



ginning of the year as compared with the market price at the end of the year gave a decrease in the inventory of \$444.

A careful analysis of the farm accounts, based upon the table of prescribed values of products, which in most instances was below the market price, and the estimated cost of board for employees, which was also below cost, would indicate that we share the common fate of many other farms. By crediting the labor of farm employees and the work done by horses and oxen to such indispensable institution needs as hauling coal, freight, the removal of snow, rubbish and the like, the farm account shows a profit for the year of \$968.44.

The products of the farm and garden are as follows: milk, 63,144.1 quarts; eggs, 4,062 $\frac{1}{2}$  dozen; ensilage corn, 115 tons; mangel-wurzels, 4 $\frac{1}{5}$  $\frac{1}{10}$  tons; oats and peas, 2 $\frac{4}{5}$  tons; rye, 4 $\frac{4}{5}$  tons; millet, 1 $\frac{9}{20}$  tons; barley, 2 $\frac{3}{4}$  tons; green fodder corn, 8 $\frac{1}{2}$  tons; asparagus, 10 boxes; string beans, 18 $\frac{1}{3}$  bushels; shell beans, 10 $\frac{1}{2}$  bushels; beets, 54 bushels; beet greens, 12 $\frac{1}{4}$  bushels; cabbage, 51 hundredweight; carrots, 76 $\frac{1}{2}$  bushels; cauliflower, 1 bushel; celery, 25 $\frac{5}{8}$  boxes; Swiss chard, 16 bushels; sweet corn, 96 $\frac{1}{4}$  bushels; cucumbers (table), 20 bushels; cucumbers (pickling), 6 bushels; lettuce, 44 bushels; onions, 41 bushels; peas (green), 19 bushels; peppers, 1 bushel; rhubarb, 875 pounds; squash (summer), 6 barrels; tomatoes, 61 bushels; turnips, 100 bushels; potatoes, 161 $\frac{1}{4}$  bushels; strawberries, 45 baskets.

There were also dressed and slaughtered for home consumption 572 pounds of chicken, 2,394 pounds of beef, and 11,121 pounds of pork.

While it is doubtful if any extensive farm operations comparable to those thought to be desirable in most other State institutions should be undertaken with practically no patient or inmate labor, the importance of having more land for the adequate maintenance of the dairy and for other purposes essential to the welfare of a large number of children was recognized by the last Legislature, by which your request for an appropriation for the purchase of more land was granted. It will not be necessary to pay rental for pasturage another year, and much of the area now used for field crops can doubtless be



used to great advantage for the production of fruits and small vegetables, in which many of our older boys and girls can be profitably trained.

#### INCOME

for the year amounted to \$43,627.23 as compared to \$51,538.87, the amount received last year. This difference may be explained by the unwillingness of certain towns and cities to acknowledge the settlement of some patients as determined by the Department of Public Welfare. Whenever such complications have caused payments for board to be long delayed, or whenever liability has been denied, the matter has been referred to the Attorney-General for adjustment. Eight such cases are now pending. Maintenance expenses totalizing \$141,883.05, divided by 274.44, the daily average number of patients, gave a weekly per capita cost of \$9.9421+.

By deducting the receipts from the total expenditures and again dividing by the daily average, the net per capita cost to the State was found to be \$6.885.

The problems of the year have necessitated many demands upon the trustees for counsel and advice which have invariably been most helpful, and in closing, reference should also be made to those officials and employees who have given the institution many years of faithful service. Their reliability and experience, together with improved labor conditions, render the outlook for the coming year one of encouragement and promise.

Respectfully submitted,

JOHN E. FISH,

*Superintendent.*

## TERMS OF ADMISSION.

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Crippled and deformed children of the Commonwealth, between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about two miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

There is also an automobile omnibus line about one-eighth of a mile distant which connects with the Boston Elevated Railroad at Mattapan.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

### DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Abscess of muscles of back, . . . . .	1	—	1
Amputation of arm, . . . . .	1	—	1
Chondrodystrophia, . . . . .	—	1	1
Congenital club foot, . . . . .	1	—	1
Congenital dislocation of hip, . . . . .	—	1	1
Dislocation of knee and fracture of tibia, . . . . .	—	1	1
Infantile paralysis, . . . . .	20	13	33
Infectious arthritis, . . . . .	1	—	1
Multiple osteomyelitis, . . . . .	3	—	3
Obstetrical paralysis with arthritis and torticollis, . . . . .	—	1	1
Post diphtheritic paralysis, . . . . .	—	1	1
Rachitic deformity, . . . . .	1	2	3
Scoliosis, . . . . .	—	1	1
Scoliosis and club foot, . . . . .	—	1	1
Spastic paralysis, . . . . .	6	5	11
Spina bifida paralysis, . . . . .	1	—	1
Syphilitic arthritis, . . . . .	1	—	1
Traumatic spastic paralysis, . . . . .	1	—	1

DISABILITY ON ADMISSION — *Concluded.*

	Boys.	Girls.	Total.
Tuberculous disease of ankle, . . . .	1	—	1
Tuberculous disease of elbow, . . . .	—	1	1
Tuberculous disease of hip, . . . .	4	6	10
Tuberculous disease of hip and amputation of foot, . . . .	—	1	1
Tuberculous disease of jaw and hand, . .	—	1	1
Tuberculous disease of knee, . . . .	2	1	3
Tuberculous disease of sacrum, . . . .	—	1	1
Tuberculous disease of spine, . . . .	4	5	9
Tuberculous disease of spine and knee, .	1	—	1
Tuberculous disease of wrist, . . . .	1	—	1
Totals, . . . .	50	43	93

## NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts, . . . .	79	20	23
Other New England States, . . . .	4	3	9
Other States, . . . .	5	9	7
Total native, . . . .	88	32	39
Other countries: —			
Austria, . . . .	—	2	3
Azores, . . . .	—	1	1
Canada, . . . .	—	13	7
Channel Islands, . . . .	—	—	1
Cuba, . . . .	1	—	—
England, . . . .	—	1	3
Germany, . . . .	—	1	1
Ireland, . . . .	—	6	11
Italy, . . . .	2	10	9
Japan, . . . .	1	—	—
Newfoundland, . . . .	—	2	1
Poland, . . . .	—	7	5
Portugal, . . . .	—	1	1
Russia, . . . .	1	5	5
Scotland, . . . .	—	2	1
Sweden, . . . .	—	1	1
Syria, . . . .	—	1	1
Total foreign, . . . .	5	53	51
Unknown, . . . .	—	8	3
Totals, . . . .	93	93	93

## VALUATION.

Nov. 30, 1920.

## REAL ESTATE.

Land, 65 acres, . . . . .	\$15,000 00
Administration building with added wing and extension, two dormitories and power house, . . . . .	174,069 89
Equipment for heat, light and power, . . . . .	7,058 47
Infirmary, . . . . .	23,849 77
Industrial building, . . . . .	12,478 10
Assembly hall, . . . . .	29,812 91
Girls' cottage, . . . . .	6,133 68
Boys' cottage, . . . . .	12,559 08
New girls' cottage, . . . . .	11,655 50
Stable now being remodeled, . . . . .	3,640 46
New barn, . . . . .	5,995 01
Cow barn with silos, . . . . .	3,250 88
Milk house, . . . . .	761 38
Henhouse, . . . . .	30 00
Henhouses, . . . . .	863 14
Garage, . . . . .	1,954 01
Piggery, . . . . .	3,005 05
Ice house, . . . . .	904 19
Two isolation houses, . . . . .	501 00
Shop, . . . . .	150 00
Fairbanks scales, . . . . .	745 31
Granolithic walks, . . . . .	3,438 92
Water system, . . . . .	8,597 46
Filter beds, . . . . .	1,295 00
Telephone wires, . . . . .	391 62
	<hr/>
	\$328,140 83

## PERSONAL PROPERTY.

Travel, transportation and office expenses, . . . . .	\$6,714 20
Food, . . . . .	4,630 49
Clothing and materials, . . . . .	9,764 47
Furnishings and household supplies, . . . . .	34,504 37
Medical and general care, . . . . .	7,002 85
Heat, light and power, . . . . .	5,628 58
Farm, . . . . .	17,397 97
Garage, stable and grounds, . . . . .	14 70
Repairs, ordinary, . . . . .	5,886 08
	<hr/>
	\$91,543 71

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1920:—

### CASH ACCOUNT.

Balance Dec. 1, 1919,	\$1,006	12
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### *Receipts.*

#### *Institution Receipts.*

#### Board of inmates:—

Private,	\$1,675	72
Reimbursements, State minor wards,	10,469	15
Cities and towns,	30,755	81
Reimbursements, charitable,	60	00
		\$42,960 68

#### Sales:—

Travel, transportation and office expenses,	\$1	59
Clothing and materials,	80	82
Furnishings and household supplies,	30	
Medical and general care,	41	05
Heat, light and power,	37	22

#### Farm and stable:—

Cows and calves,	\$142	00
Hides,	83	50
		225 50

Repairs, ordinary,	46	99
		433 47

#### Miscellaneous receipts:—

Interest on bank balances,	\$161	98
Sundries,	71	10
		233 08

43,627 23

### *Receipts from Treasury of Commonwealth.*

#### Maintenance appropriations:—

Balance of 1919,	\$4,066	65
Advance money (amount on hand November 30),	10,000	00
Approved schedules of 1920,	125,586	02
		139,652 67

Special appropriations,	227	15

Total,	\$184,513	17
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*Payments.*

## To treasury of Commonwealth: —

Institution receipts, . . . . .	\$43,627 23	
Refunds, account, maintenance, \$18.20; account, other, \$11.63, . . . . .	29 83	
	<hr/>	\$43,657 06

## Maintenance appropriations: —

Balance November schedule, 1919, . . . . .	\$5,179 72	
Eleven months' schedules, 1920, . . . . .	\$125,586 02	
Less returned, . . . . .	18 20	
	<hr/>	125,567 82
November advances, . . . . .	8,625 95	
	<hr/>	139,373 49

## Special appropriations: —

Approved schedules, . . . . .	\$227 15	
Less returned, . . . . .	11 63	
	<hr/>	\$215 52
Less advances, last year's report, . . . . .	106 95	
	<hr/>	108 57

## Balance, Nov. 30, 1920: —

In bank, . . . . .	\$1,248 10	
In office, . . . . .	125 95	
	<hr/>	1,374 05

Total, . . . . .		\$184,513 17
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## MAINTENANCE.

Balance from previous year, brought forward, . . . . .	\$439 81
Appropriation, current year, . . . . .	142,850 00

Total, . . . . .	\$143,289 81
Expenses (as analyzed below), . . . . .	141,883 05

Balance reverting to treasury of Commonwealth, . . . . .	\$1,406 76
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*Analysis of Expenses.*

## Personal services: —

John E. Fish, M.D., superintendent, . . . . .	\$4,000 00	
Medical, . . . . .	3,520 00	
Administration, . . . . .	4,115 29	
Kitchen and dining-room service, . . . . .	5,745 12	
Domestic, . . . . .	6,697 29	
Ward service (male), . . . . .	1,337 19	
Ward service (female), . . . . .	11,345 89	
Industrial and educational department, . . . . .	6,240 06	
Engineering department, . . . . .	6,164 66	
Repairs, . . . . .	2,270 95	
Farm, . . . . .	3,432 17	
Stable, garage and grounds, . . . . .	2,647 72	
	<hr/>	\$57,516 34

## Religious instruction: —

Catholic, . . . . .	\$520 00	
Hebrew, . . . . .	490 00	
Protestant, . . . . .	500 00	
	<hr/>	1,510 00

Amount carried forward, . . . . .	\$59,026 34
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*Amount brought forward,* . . . . . \$59,026 34

Travel, transportation and office expenses: —

Advertising, . . . . .	\$69 11
Postage, . . . . .	136 66
Printing and binding, . . . . .	290 38
Printing annual report, . . . . .	74 81
Stationery and office supplies, . . . . .	234 23
Telephone and telegraph, . . . . .	385 14
Travel, . . . . .	444 09
Freight, . . . . .	14 19

1,648 61

Food: —

Flour, . . . . .	\$4,027 84
Cereals, rice, meal, etc., . . . . .	524 26
Bread, crackers, etc., . . . . .	364 21
Peas and beans (canned and dried), . . . . .	657 95
Macaroni and spaghetti, . . . . .	72 60
Potatoes, . . . . .	1,938 63
Meat, . . . . .	5,808 64
Fish (fresh, cured and canned), . . . . .	1,278 16
Butter, . . . . .	4,933 81
Butterine, etc., . . . . .	264 61
Peanut butter, . . . . .	54 83
Cheese, . . . . .	120 27
Coffee, . . . . .	289 08
Tea, . . . . .	120 12
Cocoa, . . . . .	135 13
Eggs (fresh), . . . . .	503 31
Sugar (cane), . . . . .	2,341 93
Fruit (fresh), . . . . .	1,042 45
Fruit (dried and preserved), . . . . .	1,146 81
Lard and substitutes, . . . . .	578 72
Molasses and syrups, . . . . .	76 14
Vegetables (fresh), . . . . .	320 79
Vegetables (canned and dried), . . . . .	513 78
Seasonings and condiments, . . . . .	254 23
Yeast, baking powder, etc., . . . . .	314 01
Sundry foods, . . . . .	107 02
Freight, . . . . .	482 68

28,272 01

Clothing and materials: —

Boots, shoes and rubbers, . . . . .	\$1,060 25
Clothing (outer), . . . . .	409 97
Clothing (under), . . . . .	288 26
Dry goods for clothing, . . . . .	1,197 64
Hats and caps, . . . . .	18 08
Leather and shoe findings, . . . . .	267 35
Machinery for manufacturing, . . . . .	16 57
Socks and smallwares, . . . . .	415 48
Sundries, . . . . .	30 00
Freight, . . . . .	18 25

3,721 85

*Amount carried forward,* . . . . . \$92,668 81

*Amount brought forward,* . . . . . \$92,668 81

Furnishings and household supplies: —

Beds, bedding, etc., . . . . .	\$1,112 45
Carpets, rugs, etc., . . . . .	233 85
Crockery, glassware, cutlery, etc., . . . . .	632 11
Dry goods and smallwares, . . . . .	48 12
Electric lamps, . . . . .	122 82
Furniture, upholstery, etc., . . . . .	297 31
Kitchen and household wares, . . . . .	863 64
Laundry supplies and materials, . . . . .	1,164 15
Lavatory supplies and disinfectants, . . . . .	146 34
Table linen, paper napkins, towels, etc., . . . . .	444 58
Sundries, . . . . .	23 70
Freight, . . . . .	67 75

5,156 82

Medical and general care: —

Books, periodicals, etc., . . . . .	\$85 23
Entertainments, games, etc., . . . . .	280 80
Gratuities, . . . . .	19 80
Ice and refrigeration, . . . . .	302 65
Laboratory supplies and apparatus, . . . . .	178 45
Medicines (supplies and apparatus), . . . . .	1,665 52
Return of runaways, . . . . .	1 00
School books and supplies, . . . . .	144 56
Tobacco, pipes, matches, . . . . .	6 34
Water, . . . . .	734 40
Sundries, . . . . .	36 75
Freight, . . . . .	41 89

3,497 39

Heat, light and power: —

Coal (bituminous), . . . . .	\$7,272 01
Freight and cartage, . . . . .	5,238 42
Coal (anthracite), . . . . .	879 75
Freight and cartage, . . . . .	351 34
Oil, . . . . .	141 40
Operating supplies for boilers and engines, . . . . .	131 58
Sundries, . . . . .	3 19
Freight, . . . . .	5 61

14,023 30

Farm: —

Bedding materials, . . . . .	\$387 49
Blacksmithing and supplies, . . . . .	152 09
Carriages, wagons and repairs, . . . . .	136 85
Dairy equipment and supplies, . . . . .	25 11
Fencing materials, . . . . .	53 50
Fertilizers, . . . . .	1,408 27
Grain, etc., . . . . .	7,366 58
Hay, . . . . .	3,336 39
Harnesses and repairs, . . . . .	14 50
Other live stock, . . . . .	653 25
Labor (not on pay roll), . . . . .	58 80
Rent, . . . . .	115 00
Spraying materials, . . . . .	3 00
Stable and barn supplies, . . . . .	131 62

*Amounts carried forward,* . . . . . \$13,842 45 \$115,346 32

*Amounts brought forward,* . . . . . \$13,842 45 \$115,346 32

*Farm — Concluded.*

Tools, implements, machines, etc., . . . . .	407 43	
Trees, vines, seeds, etc., . . . . .	267 08	
Veterinary services, supplies, etc., . . . . .	45 00	
Sundries, . . . . .	2 97	
Freight, . . . . .	12 73	
		14,577 66

*Garage, stable and grounds: —*

Motor vehicles, . . . . .	\$2,300 00	
Automobile repairs and supplies, . . . . .	2,106 58	
Bedding and materials, . . . . .	179 63	
Labor (not on pay roll), . . . . .	24 00	
Road work and materials, . . . . .	146 58	
Spraying materials, . . . . .	32 13	
Stable supplies, . . . . .	6 85	
Tools, implements, machines, etc., . . . . .	143 15	
Trees, vines, seeds, etc., . . . . .	5 94	
Sundries, . . . . .	2 00	
Freight, . . . . .	89	
		4,947 75

*Repairs, ordinary: —*

Brick, . . . . .	\$62 34	
Cement, lime, crushed stone, etc., . . . . .	183 63	
Electrical work and supplies, . . . . .	191 76	
Hardware, iron, steel, etc., . . . . .	356 42	
Labor (not on pay roll), . . . . .	571 66	
Lumber, etc. (including finished products), . . . . .	614 68	
Paint, oil, glass, etc., . . . . .	840 49	
Plumbing and supplies, . . . . .	483 33	
Roofing and materials, . . . . .	43 60	
Steam fittings and supplies, . . . . .	200 18	
Tents, awnings, etc., . . . . .	58 02	
Tools, machines, etc., . . . . .	287 06	
Boilers, repairs, . . . . .	155 25	
Sundries, . . . . .	329 00	
Freight, . . . . .	105 76	
		4,483 18

*Repairs and renewals: —*

Repairs on boilers, . . . . .	\$360 00	
New foundations for old barn and permanent repairs to piazzas to dormitories, . . . . .	2,168 14	
		2,528 14

Total expenses for maintenance, . . . . . \$141,883 05

*SPECIAL APPROPRIATIONS.*

Balance Dec. 1, 1919, . . . . .	\$234 12	
Appropriations for current year, . . . . .	90,000 00	
Total, . . . . .	\$90,234 12	
Expended during the year (see statement below), . . . . .	\$215 52	
Reverting to treasury of Commonwealth, . . . . .	18 60	
		234 12

Balance Nov. 30, 1920, carried to next year, . . . . . \$90,000 00

OBJECT.	Act or Resolve.	Whole Amount.	Ex- pended during Fiscal Year.	Total ex- pended to Date.	Balance at End of Year.
Addition to administration building.	Resolves of 1917, chapter 104.	\$15,000 00	\$215 52	\$14,981 40	\$18 60
Purchase of land, . . .	Acts of 1920, chapter 225, Item 526.	15,000 00	—	—	15,000 00
Buildings for State minor wards.	Acts of 1920, chapter 629, Item 526½.	75,000 00	—	—	75,000 00
		\$105,000 00	\$215 52	\$14,981 40	\$90,018 60

Balance reverting to treasury of the Commonwealth, . . . . .	\$18 60
Balance carried to next year, . . . . .	90,000 00
Total as above, . . . . .	\$90,018 60

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand, . . . . .	\$1,374 05	
November cash vouchers (paid from advance money), account of maintenance, . . . . .	8,625 95	\$10,000 00
Due from treasury of Commonwealth from available appropriation account November, 1920, schedule, . . . . .	6,315 23	\$16,315 23

*Liabilities.*

Schedule of November bills, . . . . .	\$16,315 23
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## PER CAPITA.

During the year the average number of inmates has been 274.44.  
 Total cost for maintenance, \$141,883.05.  
 Equal to a weekly per capita cost of \$9.9421 +.  
 Receipt from sales, \$433.47.  
 Equal to a weekly per capita of \$0.0303 +.  
 All other institution receipts, \$43,193.76.  
 Equal to a weekly per capita of \$3.0267 +.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK,  
*Auditor.*









The Commonwealth of Massachusetts

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ANNUAL REPORT

OF THE

TRUSTEES OF THE MASSACHUSETTS  
HOSPITAL SCHOOL

FOR THE

YEAR ENDING NOVEMBER 30, 1921

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DEPARTMENT OF PUBLIC WELFARE



BOSTON

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# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

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### TRUSTEES.

EDWARD H. BRADFORD, M.D., <i>Chairman</i>	. . . . .	BOSTON.
LEONARD W. ROSS, <i>Secretary</i>	. . . . .	TAUNTON.
ALFRED S. PINKERTON	. . . . .	WORCESTER.
WILLIAM F. FITZGERALD	. . . . .	BROOKLINE.
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### RESIDENT OFFICERS.

JOHN E. FISH, M.D.	. . . . .	<i>Superintendent and Treasurer.</i>
ORA G. DANIELS, M.D.	. . . . .	<i>Assistant Physician.</i>
LYSANDER S. KEMP, M.D.	. . . . .	<i>Assistant Physician.</i>
MARY W. WENTWORTH	. . . . .	<i>Clerk.</i>
MARGARET MACDONALD	. . . . .	<i>Head Nurse.</i>
ALICE B. MACADAM	. . . . .	<i>Supervising Nurse.</i>
ALEXSANDRAENA RUDLAND	. . . . .	<i>Supervising Nurse.</i>
CORA E. RICHARDSON	. . . . .	<i>Head Teacher.</i>
ELIZABETH A. FERNALD	. . . . .	<i>Housekeeper.</i>
LILLIAN S. SWIMM	. . . . .	<i>Matron.</i>
WILLIAM H. COFFIN	. . . . .	<i>Engineer.</i>
JESS BLACK	. . . . .	<i>Farmer.</i>

---

### BOARD OF CONSULTANTS.

ROBERT W. LOVETT, M.D.	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
AUGUSTUS THORNDIKE, M.D.	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>
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ARTHUR T. LEGG, M.D.	. . . . .	<i>Surgeon, Department of Orthopedic Surgery.</i>





# The Commonwealth of Massachusetts

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## REPORT OF THE TRUSTEES.

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*To His Excellency the Governor and the Honorable Council.*

The trustees are able to report another year of successful operation of the Massachusetts Hospital School, and the people of the Commonwealth can find a source of gratification in the fact that the care of crippled children in the State is satisfactorily provided for at the school at Canton. The results obtained have been most gratifying, and the institution has been visited by many workers in this field of charity from various parts of the country and abroad who are interested in the careful study of the work of this school, which was one of the first to be established along the line of carrying on the education, training and care of cripples with necessary surgical aid.

As a hospital boarding school for crippled children under the age of fifteen, the work of the institution has been, as proved by its alumni association, most successful. In view of the fact that increased attention is being paid to the subject of the rehabilitation of cripples, it may be well to present for consideration some facts which have been brought to the attention of the trustees by the results at Canton.

In the care and training of cripples, it is evident in the case of children, especially those permanently crippled by paralysis, that the problem is different from what it is in adults or those injured by industrial accidents. There is a distinction also between the crippled condition of young children and that of adolescents or young adults. The work at the Massachusetts Hospital School has shown conclusively that the problem of

education is even more important than that of surgical relief. The chief object in the education of severely crippled children is to develop in them the spirit of self-reliance with the complete abolishment of any sense of self-pity. For this reason it is of great importance that young children should be removed from the isolated life of home and placed in a group of those similarly crippled. Under these conditions, if the institution in which they are placed is properly organized and furnishes the proper educational facilities and activities, they lose entirely a sense of being different from ordinary children. They are stimulated to activity and are brought to a more normal intellectual point of view. The work for the last fourteen years at the Canton school has proved the fact beyond question, and has shown that the oversensitive, self-pitying cripple may, in a few weeks, be brought to the mental attitude of a healthy child, and later into a self-confidence which is necessary for self-support.

It has also been shown that, from an educational standpoint, it is desirable that special vocational training should not be given to young children before they have received the ordinary fundamental training needed for every citizen in the Commonwealth. Some elementary manual and industrial work may be added, partly as a matter of education and partly to determine the aptitudes of different children. The problem, however, of teaching the cripple does not end in educating the child to the age of fifteen and implanting in him a spirit of self-reliance and the energy to utilize whatever faculties he has to the best of his ability, important as these qualities are. A much more difficult and complicated task is presented in the training of the adolescent cripples, especially those of a grade of intelligence which demands more instruction than is furnished in the grammar school curriculum or in the usual high school course for physically normal children. What is needed is vocational and industrial training adapted to the specific disability of the individual. It is also necessary to consider instruction that will be suited to the bread-winning conditions of the community in which the pupil is to be placed after graduation. It will be found that the same methods which have been used successfully in teaching younger children are

less applicable, if applicable at all, to older ones or adolescents. In the case of such cripples who have been taught self-reliance, some classification is necessary, and it will be found at once that in some instances a high school education is not adapted to the intellectual capacity of the pupil, and that the grammar school is adequate for such ability as he possesses. As with the unmaimed, uncrippled individuals, some are fitted for outdoor farm work, some for domestic work or for the factory; while others have intellectual qualities and a different grade of intelligence which qualifies them for clerical work or even professional careers. Crippled children, in many instances, possess certain mental qualities necessitated by their disability which have led them to more contemplative habits. This class should not only receive a high school education but also instruction which is more especially suited to their physical limitations, for it is evident that the crippled child has a narrower range in the pursuit of self-support than one who is physically normal. A high school course with well-selected vocational training is what is needed. It will be found, however, that instruction in larger groups is desirable for young pupils, while in the case of older adolescent cripples the reverse is the case. They should be thrown with normal individuals in order to exercise their self-reliant qualities in comparison with those of the normal, that they may be trained for the work of self-support which comes upon them. It is manifestly important that co-education of the sexes should not be carried on among the adolescent or the young adult cripples.

An adequate provision for the development of the natural abilities of adolescent and young adults, who have received at least a grammar school education and all the benefit possible in surgical and medical relief for their physical handicap, should consist in the establishment of a junior high school instruction at such locality or localities as can be reached easily by cripples who require special training not available in ordinary schools. These adult or adolescent cripples, if not living at home, should be boarded in subsidized or authorized boarding places at accessible distances from the school. The plan would require careful thought, much elasticity and thorough supervision by an interested plan-out committee, and the sympathetic support

and co-operation of alumni associations, with stated meetings and organized efforts to obtain information as to the success and difficulties of the bread-winning schoolmates, would be of assistance also.

Such a project, as is here mentioned, demands a large amount of accumulated information to avoid failure and wasted effort. It would also require a large outlay of money. It should not, therefore, be attempted as a whole, but as a gradual development as experience teaches and opportunity arises.

Whether such an organization should be the function of the Commonwealth or of a private charitable foundation is a question which will depend upon the attitude of the public mind to solve. There are arguments favoring either plan. There is greater elasticity and variety in private enterprise, and, as a rule, less danger of superficiality and faddishness in government institutions. The smaller the number to be handled and the greater the variety of undertakings, the greater would be the advantages of private enterprise, but they should be conducted under careful government supervision and inspection, and there should be close and active co-operation between the private and State agencies engaged in this form of educational effort.

There is no doubt that there is a general interest in the community in the problem of the relief of the cripple, and the subject of rehabilitation of the maimed has been brought to public attention with renewed importance since the recent war.

As an evidence of public interest to help disabled persons, the Commonwealth of Massachusetts, by legislative action effective August 25, 1921, accepted the provisions of an act of Congress whereby "persons disabled in industry or otherwise," and residing in the Commonwealth of Massachusetts, may be enrolled in vocational training courses planned for their vocational rehabilitation. For this purpose the Commissioner and Advisory Board of Education are constituted and designated as the State Board of Vocational Education, and directed to co-operate with the Federal Board for Vocational Education, and to establish and maintain, or to assist in establishing and maintaining, such courses as it may deem advisable and necessary.

There is no question, however, that the need of proper provision for the training of seriously crippled children is to remain a duty in the Commonwealth, even though it is difficult to determine the extent of the demand. There is a constant number each year, independent of epidemic cases of infantile paralysis, who will remain so maimed as to require special assistance.

Now it has been shown that so much can be done for such cases by what has been accomplished at the Massachusetts Hospital School for the younger children, it is evident that more should be attempted for the equally deserving older cripples. If a boy, with both legs permanently paralyzed, can be brought to such a state of self-reliance and energy that he can pitch a nine inning game for a team of variously crippled comrades and win from a team of normal boys; if a young girl with both hands paralyzed and useless can be trained so as to do fine needlework, cut patterns and make her own dresses, threading her needle and performing all the work with her feet; if a boy paralyzed in all his extremities can edit a school newspaper, setting type with his lips, there is no doubt that such and similar children deserve help and can be made serviceable citizens, if they receive proper guidance and aid. Left to their own handicapped selves they may minimize their defects; but with proper guidance they can develop superior qualities and become assets to the community.

The statistics of the alumni association show how much the graduates of the school are doing now with the start which has been given them. Unquestionably some of them could do more if larger opportunities were open to them. There is no doubt that this should be done if plans for such a hopeful educational effort could be wisely made.

It would be desirable, before considering definite plans for the rehabilitation and the higher education of cripples, to learn the number in the Commonwealth needing such provision and deserving advanced education; but in the view of the lack of satisfactory statistics only an approximate estimate can be made of this class.

Guided by the alumni of the Massachusetts Hospital School, we feel assured that those graduates, permanently disabled and



so deprived of education in the ordinary schools and yet whose chances of a useful life and self-support would be increased if advanced education were provided, and whose mental capability justifies higher education, number at least three in each graduating class. A boy of sixteen, paralyzed in both legs and walking with difficulty, or not at all without crutches, may become much more useful by some advanced training than if he has only a limited grammar school education.

If it is supposed that in the Commonwealth there may be each year a dozen of such promising pupils, mentally imprisoned by their deformity, it would seem as if a properly organized society emancipation from a life sentence of useless disability should be made possible for those whose health and mental vigor promise capability for usefulness.

The financial outlay needed for such an educational enterprise would be relatively small, provided the plan for such an undertaking were thoroughly considered so that there would be a minimum of waste in the undertaking.

With the new infirmary (chapter 629, Acts of 1920, and chapter 502, Acts of 1921), which will doubtless be completed in the spring of 1922, the institution will have accommodations for at least one-third more children than it was designed to accommodate originally. Some changes in power plant, laundry, water supply, etc., will be necessary to adapt the original group for 300 children to the enlarged function of an institution to provide hospital care for sick minor wards.

The 100-bed infirmary will doubtless be adequate to meet the demands for the hospital care of all the sick minor wards who are not feeble-minded, epileptic or otherwise not properly classifiable in other existing institutions.

With the information now available, it seems probable that it will be found desirable to erect a few small cottages for the care of minor wards during the convalescent period, when they will not need expensive bedside nursing and yet are not quite well enough to be discharged.

The details of enlarging certain departments for successful administration of the new infirmary, as well as provision for

convalescent patients, can best be determined after the new infirmary has been put into actual operation.

The superintendent's and treasurer's reports are hereto annexed and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
ALFRED S. PINKERTON.  
WILLIAM F. FITZGERALD.  
WALTER C. BAYLIES.

## SUPERINTENDENT'S REPORT.

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*To the Trustees of the Massachusetts Hospital School.*

In reviewing the work of the school for the fourteenth year ending Nov. 30, 1921, it is of interest to note that the children

### ADMITTED

continue to represent, in about equal proportion, two general types of cripples, — those who may be expected to recover under well-adapted treatment, and whose education should not be neglected during a long period of convalescence, and those permanently crippled, whose physical and mental faculties should be developed with a view to future self-support. Now that there is a better understanding throughout the State of the purpose for which the institution was established, fewer applications are made for the education of children under school age, or for the entrance of those who are of very low mentality, hopelessly bedridden or otherwise destined to lives of complete dependency.

More than 1,000 pupils have been enrolled since the school was established, and fully as many more have doubtless been rejected as neither improvable nor recoverable or as ineligible on account of age. For the past few years, however, both applicants and admitted cases have been fairly uniform in respect to age, sex, disability and probable future. If these cases are taken as a guide, it seems probable that there will continue to be a demand for hospital and school accommodations for not less than 300 cripples of primary and grammar school grades. Approximately 500 children in Massachusetts are now receiving elementary school training in the State and private institutions for cripples, and with an awakened community sense of the educational needs of the cripple, there is an increasing demand for junior high school opportunities and more advanced training. This is unquestionably a hopeful

sign; but whether or not the work of the Hospital School, which has helped to bring about this larger horizon for the cripple, should be extended is a matter which the trustees should soon consider. The administrative objections to having both young adults and primary grade children in the same boarding school could be very largely overcome, and provision made for more advanced industrial training for certain selected pupils, by the erection of detached cottage units on Hospital School land recently acquired by the State. A solution of the problem in greater Boston might be found by the gradual elimination of the elementary grade pupils from the Boston Industrial Day School for Cripples, and an extension of its work to provide for a corresponding number of advanced pupils. But if the younger children should not be entered at the Boston school and sent to Canton, there would still be no provision for crippled boys and girls of high school capacity in other parts of the State. In considering any plan for continuation instruction into high school subjects, it should be borne in mind that many pupils, upon the completion of a grammar school course, will wish to become wage earners immediately, especially if they have for physical reasons lost much time or found difficulty in gaining even an eighth-grade diploma. It is found by experience that there are a few promising pupils who for physical reasons should remain after the completion of the present prescribed course of study, either to complete their convalescence or because educational opportunities are not available to them elsewhere. A case of tuberculous hip disease, for example, may not recover sufficiently to justify discharge for a year or more after graduation from the present highest grade, or a child who is destined to a life in a wheel chair should be aided beyond the grammar school, if possessed of unusual intellectual power.

It seems highly desirable that some provision should be made at an early date, either here or elsewhere, for advanced training for a few selected graduates of the school.

During the year just closed there have been 354 children under treatment, as shown by the number at the beginning of the year, — 161 boys and 133 girls, and the 33 boys and 27 girls who were admitted. The oldest was fifteen and the

youngest four years eight months, giving an average admission age of nine years two months as compared to eight years eleven months, the average for last year. Tuberculous bone disease and infantile paralysis continue as in past years to be the contributory causes of nearly two-thirds of the admissions, while the

#### NATIVITY

is also substantially the same as heretofore. Fifty-one, or 85 per cent, were born in Massachusetts; 4, or  $6\frac{2}{3}$  per cent, were born in other parts of the United States; and 5, or  $8\frac{1}{3}$  per cent, were born in foreign countries. The nativity of 6 fathers and 3 mothers was unknown; of the remainder, 12, or 22+ per cent, of the fathers, and 11, or 19+ per cent, of the mothers, were born in Massachusetts; 5 fathers and 7 mothers were born in other parts of the United States, and 37, or 68+ per cent, of the fathers, and 39, or 68+ per cent, of the mothers, were foreign born.

The maximum number at any one time during the year was 303, the minimum, 206, and the daily average number, 279.62. It is not unusual for parents to take their children home between the Friday and Monday classes, and at such times as Christmas and other holidays it has seemed desirable to grant temporary leave of absence to practically all who made the request and were physically able to go. As a general rule, the privilege has been appreciated and children found happy to return. Three hundred and eighty-six such home visits were made representing 4,168 days' absence.

Exclusive of 6 patients who died 59 were

#### DISCHARGED,

leaving a population on Nov. 30, 1921, of 155 boys and 128 girls. Of the cases discharged 5 failed to return from visits to their homes, the parents of 3 objecting to the expense and inconvenience of visiting from distant parts of the State; one father became impatient after waiting six years for his son's tuberculous hip to heal, and just as recovery seemed assured decided that he could successfully treat the boy at home; and one case, invariably late in returning from previous visits, was closed after an absence of several months.



Fourteen children were taken against advice because the parents of 2 objected to surgical operations which were recommended; 2 others refused to reimburse places of settlement when the overseers of the poor found them well able to do so; 1 was removed fifteen days after entrance when an apprehensive mother explained that she was unhappy without her child; and 9 much improved cases were taken to be given a trial in public schools near their homes.

Seven children were dismissed as mentally or physically unpromising; 1 was discharged to leave the State; and 1 wheel-chair paralytic, a girl graduate of the class of 1917, was encouraged to leave to become partially self-supporting at sewing and needle work in her own home.

Of the remaining 31 cases discharged, 19 had either recovered or improved sufficiently to continue their education in competition with normal children in the public schools; 1 entered the Boston Industrial School for Cripples to study printing; and 11 found employment and are now self-supporting.

It is gratifying to report that 61+ per cent of the discharged cases are able to maintain creditable standing in other schools or are successful wage earners. Many graduates enter public high schools without conditions, and a few have obtained such a grasp of scholarship as to give promise of becoming men and women of broad culture. It is obvious that heredity and environment are as influential in the cripple as in children without physical handicap, and that the scholastic work of the school has been notably successful as shown by the record of its graduates. This success is largely due to the sympathetic prompting to perseverance given by the teachers, when without encouragement children fighting against heavy odds would have given up disheartened. As an illustration of the steady development of character directly traceable to the constant inspiration of prosperous alumni, the helpful influence of interested employees and the associations which exist at the school, the record of one boy who was discharged in September will be of interest. He came from a home in a congested tenement-house district of an eastern Massachusetts city in which his foreign-born parents were employed as mill oper-



atives. He entered at the age of six years in the spring of 1912, had never attended school, and was suffering from a very extensive osteomyelitis. One leg had been amputated just below the knee joint; one elbow joint was stiff in the position of a right angle; one cheek bone and the bones of his nose were partially destroyed; and he had several discharging bone abscesses. For months he was a bed patient at the infirmary, and at times his symptoms were very acute indeed. Finally he was able to attend school an hour a day; the period was gradually extended to an hour and a half in the third grade, and eventually to the maximum of two hours in the seventh and eighth grades. Fresh, pure air and life in the open was essential to his recovery, and he obtained it in abundance in an outdoor school, upon the playgrounds, as he followed the farmers and assisted them in their work, and by sleeping under a monitor roof at night. Of course he learned to swim and became an enthusiastic member of the baseball team. He frequently played a winning game, and he also learned to be a courageous loser, so that he faced his failure to graduate with his class of 1920 without complaint, and manfully entered the class of 1921 with which he was graduated with honors. It took nine years to cure this boy and to teach him to overcome his handicap; but it was well worth the effort to see him proudly walk away upon his new artificial leg with the school diploma under his arm and his class pin displaying the seal of the Commonwealth upon his coat. His devoted mother cannot speak English, but her appreciation was unmistakable and her confidence in her boy well-founded, for he is now earning a wage of \$16 per week in the factory with his father, and attending night high school.

Some progress has been made in the matter of

#### INDUSTRIAL TRAINING,

but the majority of the children now entering the school are too young to justify special emphasis upon this branch of education.

Experience has shown that it is advisable to begin the education of the crippled child at a very early period. The training of the average cripple is necessarily protracted, and should

commence as early as possible. Furthermore, the influences which surround a crippled child at home are not helpful to a feeling of independence, and the work of education should begin at a time when these harmful influences have done the least evil. The girls are taught cooking, sewing, general housework, laundering and similar domestic arts as a routine course for all, while a few selected cases are assigned to office work, the telephone desk, typewriting, etc. Farming, gardening, the care of poultry, work in the dairy, an apprenticeship with the baker, engineer, carpenter, painter, store man, tailor, cobbler, chauffeur and other necessary employees afford educational opportunities of value to many of the older boys.

The average age of the children discharged was twelve years four months twelve days.

#### MEDICAL AND SURGICAL.

Fortunately there have been no acute illnesses of consequence. Gastrointestinal disorders, common colds and conditions ordinarily observed in children have been comparatively rare. The infirmary wards have been filled, however, with patients under treatment for fractures, minor accidents, post-operative care and such diseases as might be expected in an institution population of nearly 400.

Six patients died during the year, death being due in all cases to tuberculous disease of long standing. There were 26 cases of mumps and 2 cases of diphtheria.

The medical and nursing staff have had an opportunity to devote more time than has heretofore always been possible to the perfection of routine work of which there is an ever-present abundance. Four hundred and forty-seven individual pieces of apparatus were worn by the patients present on November 30, practically all of them being prescribed, fitted and adjusted by the assistant physicians and manufactured under their direction. One hundred and seven photographs and 80 X-rays were taken in connection with the physical examinations which are made as a part of each patient's case history.

Surgical operations were performed for the correction of double congenital club feet in one case and single congenital club foot in another. One boy went under operation for re-

amputation of the leg, and an osteotomy for an ununited fracture of both bones of the leg was performed upon one girl, all making good recoveries.

The work of the non-resident dentist was temporarily interrupted because of technicalities pertaining to civil service regulations, but he has a creditable record for the brief time assigned, as follows: 79 extractions; 79 examinations; 85 cleanings; 11 teeth opened; 31 zinc oxide and eugenol, 21 porcelain and 13 amalgam fillings.

From March 20 to April 28 Dr. C. G. Barber, house officer at the Boston Children's Hospital, rendered most acceptable voluntary service by making eye, ear, nose and throat examinations upon all patients under treatment at that time in return for the opportunity afforded for orthopedic study. Employees at the dairy and those engaged in the preparation and serving of food have been examined for the detection of any possible carriers of typhoid fever, and during the months of October and November the Schick test, to ascertain the susceptibility to diphtheria, was performed upon 129 girls, with the result that 110, or 85 per cent, were found to be immune. Further tests upon the boys are now being carried on so that it will soon be known with reasonable certainty how to most successfully combat that disease.

The amount of

#### NURSING CARE

required for many crippled children is not generally appreciated, and is worthy of special mention. It takes an hour and three-quarters as the shortest possible time in which to get the children dressed and ready for breakfast each morning. The application of splints, braces and mechanical apparatus is a daily task of importance, and for two hours and a half every evening the nurses are regularly engaged in getting their patients undressed, bathed and tucked into bed. Aside from the time taken for meals it is an unvarying requirement that the nurses shall follow the school schedule, which calls the children in no less than 35 divisions every school day. Sunday services, entertainments, visiting days, surgical dressings and general ward work are regular time-consuming items of im-

portance. Ambulatory orthopedic cases demand greater patience, tact and skill than is usually necessary in successful bedside nursing.

In general, subordinate

#### EMPLOYEES

who have been found available for the work of the institution have rendered satisfactory service throughout the year. With a greater stability of residence, which is gradually becoming apparent, greater efficiency may be expected.

The appropriation of \$73,000 for personal services was based upon an estimate that an average of 91 individuals, including part-time non-residents, would be employed. An average of \$3.28 has been possible by the employment of 168 persons. A large measure of praise is due to the officials and heads of departments, many of whom have rendered faithful service for many years.

Miss Wilma Sturtevant, teacher of manual training, resigned in June because of her approaching marriage, and the vacancy thus caused was filled by the appointment of Miss Rose Keefe, a graduate of the Massachusetts Normal Art School.

Miss Margaret MacDonald, a graduate of the Boston Children's Hospital Training School for Nurses, and with a record for most efficient work at the Industrial School for Crippled and Deformed Children, was appointed as head nurse to succeed Miss Marion M. Brown, who left the service on March 31 to enjoy a much-needed rest.

#### REPAIRS AND IMPROVEMENTS.

Aside from the minor renewals with which painter, carpenters and engineer are constantly engaged, some improvements, classifiable as not occurring annually, have been made. At odd moments, when the carpenters have found time from regular work, and with the assistance of some day labor, the old barn which they began last year to remodel into a cottage for men employees has been nearly completed, and with some plumbing and furniture will be ready for occupancy early in the coming year.

Local stone masons were engaged by the day to build some

piers and a connecting wall at the Randolph Street entrance to both front avenues leading to the administration building. Old stone walls were removed from the land recently acquired under chapter 225 of the Acts of 1920 and a new wall laid from the main entrance to the corner of St. Mary's cemetery. As many of the stones were hauled by an ox team driven by one of the boys of the school at a nominal expense, the new wall is much longer than was thought possible to build with the sum available for the purpose. It is hoped that the work may be continued another summer along Randolph Street from the kitchen driveway past the new infirmary.

The allowance of \$750 for a granolithic walk to be built on Randolph Street in co-operation with the town of Canton was but partially expended because the town's sidewalk fund was exhausted when the work was about half completed. The unexpended balance of \$366.69 under this item will be sufficient, with an equal sum from the town, to extend the walk an additional 1,985 feet.

The appropriation for an infirmary for the hospital care of 100 children (chapter 629 of the Acts of 1920 and 502, Acts of 1921) is being expended under contract with the General Building Company of Boston, the lowest bidders in competition with five other building contractors. The work is progressing satisfactorily, and it now seems probable that the building will be completed and furnished to receive patients in the spring.

The power plant and laundry now operated at full capacity must be enlarged to meet the demands of 100 additional infirmary patients, and the erection of a school building referred to in your report of last year should not long be delayed. It seems desirable, however, to clear away some of the important work at hand before making definite appropriation requests. An increased water supply and adequate shed room for the storage of farm tools and implements may also be mentioned as needs which should be met another year when the institution is to enter upon the fulfilment of its obligation to practically double its present capacity.



## MANUFACTURED ARTICLES

and repairs from the shops have been turned out promptly and satisfactorily to meet all requirements, the sewing room having to its credit 47 aprons; 211 nightgowns; 270 bath towels; 248 hand towels; 84 roller towels; 412 pillow cases; 276 sheets; 36 crib sheets; 60 underwaists; 18 caps; 27 pairs of curtains; 60 dresses; 97 blouses; 33 romper suits; 96 table napkins; 11 boys' suits; 65 pairs of bloomers; 49 tablecloths; 12 sleeping socks; 18 laundry bags; 3 brace aprons; 2 State flags; 8 sleeping suits; 10 chair and couch covers; 17 chair pillows; 16 bed jackets; 4 white jumpers; 7 white overalls; 50 tray cloths; 2 pairs of portières; 104 sterilizing covers (operating room); 25 pelvic bands; 24 shoulder straps; 1 pool table cover; 14 silence cloths; 12 baseball suits; 1 awning; 36 black curtains (assembly hall); 1 girl's coat; 9 white ties; 2 woven rugs; 1 automobile top and side curtains.

The cobbler, with his class of boys, gives a record of 1,255 shoes tapped; 806 shoes heeled; 508 shoes sewed; 47 shoes patched; 275 high soles tapped; 235 high soles heeled; 355 caliper plates applied; 187 splints covered; 15 moccasins; 191 ankle straps; 95 knee caps; 16 ankle pads; 80 back straps; 12 T straps; 38 splint moccasins; 17 pieces of harness repaired; 349 miscellaneous repairs.

One hundred and eighty-seven splints were repaired at odd hours by the engineer, who also manufactured 38 new splints, 173 caliper plates and 29 foot plates.

## FARM, DAIRY AND GARDEN

products have been classified and tabulated in accordance with the prescribed forms in use at other institutions, and are found to represent a net gain of \$4,228.75. While this would appear to be a satisfactory source of income, it is doubtful if all the refinements of accounting which can be devised can, without unwarrantable expense, accurately and definitely separate the work of the farm from other institution work which can be most advantageously performed by the labor of farm hands and teams. The cultivation of gardens and the maintenance of a dairy and poultry plant are not only of the greatest im-



portance in supplying food of a quality which could not otherwise be obtained, but they also serve as an indispensable adjunct to the institution in that men and teams are available for work not found on ordinary farms. Coal must be hauled, ashes removed, garbage and rubbish taken away, the walks cleared of snow, and ice harvested in winter and delivered to the refrigerators in summer. The delivery of freight, building of roads, supplying sand and gravel for cement work, grading, etc., make heavy demands upon the farmer's time. Milk, eggs and vegetables might, if necessary, be obtained elsewhere; but it would then be necessary to employ much labor for irregular work now being done by the farm crew. It is evident, therefore, that farm work in a small way should be continued, and as an educational factor for some of the older pupils it is of unquestionable value. More boys are now self-supporting as a direct result of the knowledge gained by their associations with the work connected with the farm than from any other training outside of the grades which the school has to offer.

Situated as the institution is, and with practically no patient labor, farming by itself alone cannot be looked upon as a money-making proposition for a number of years, if at all. It is a long, slow, tedious undertaking to convert rough scrub oak brush land into a fertile farm. About 33 acres have been cleared for cultivation. There is neither hay nor pasture land available for the feeding of stock, but more land is gradually being cleared each year, and this work will be made less difficult by the use of the tractor recently purchased for operation during the fall and spring, and at such other times as the farmhands are not engaged in more important work. Corn and green feed for the cows is at present the principal farm crop. By making due allowance for the small loss in mature cows and the gain in heifers and calves, estimating the cost of board of employees at \$20 per month, and the designated value of milk at 10 cents per quart, the dairy showed a profit of \$2,248. Seventy-three thousand one hundred and eighty-six quarts of milk were produced and none purchased during the year. Eight thousand six hundred and seventy-three pounds of pork were dressed for home consumption, and with a slight increase

in the inventory the swine represented a gain for the year of \$1,133.42. A loss of \$43.45 was the record for the poultry due to a decrease in the inventory. Repeated failures to hatch incubator chickens were finally attributed to the influence of the X-ray which was operated above the basement in which the incubators were thought to give the best results; 4,363 $\frac{3}{4}$  dozen eggs were produced and 970 pounds of fowls dressed. Five and one-half acres of land were cultivated for garden crops at an estimated loss, based upon prices given by the auditor, of \$273.02. Work of horses and oxen upon the farm was valued at \$765.78, and for institution work at \$2,289.83, showing a gain of \$765.48 after deducting all cost and shrinkage in inventory. Millet, oats and peas and field corn, without regard to the enrichment of the soil for which the former were of value, showed a loss of \$67.16, \$7.75 and \$24.52, respectively. Ensilage was raised at an estimated profit of \$292.93; 331 $\frac{3}{4}$  bushels of potatoes at an estimated profit of \$54.15; and the following slight gains were estimated upon other crops: barley, \$3.38; rye, \$22.62; green fodder corn, \$56.74; mangel-wurzels, 80 cents. Other institution products not applicable to farm credits were 280 tons of ice, 66 cords of wood and 3,900 feet of logs for lumber.

A clear title to one parcel of land, the purchase of which was authorized under the provisions of chapter 225, Acts of 1920, was finally obtained, and the land paid for on November 30. Possession by right of eminent domain has been taken of the three remaining small parcels, and a substantial line fence built upon lines established by an authorized surveyor.

#### MAINTENANCE COST.

Owing to more favorable market conditions it was possible to close the year with an unexpended balance of \$8,323.77, of which \$3,058.24 was for personal services and \$3,069.48 for food. The total expenses for maintenance were \$143,715.52, which, when divided by 279.62, the daily average number of patients, and again divided by 52, gives a weekly per capita cost of \$9.8839. Income for the year amounted to \$47,532.15, making the net weekly per capita cost to the State, \$6.6148.

There is great satisfaction in looking forward to another year and being able to report that the institution has a most harmonious official family sustained by many employees who are faithful and devoted to the duties with which they are charged, and that there is a general feeling of personal responsibility for the successful advancement of the work.

Respectfully submitted,

JOHN E. FISH, M.D.,  
*Superintendent.*

TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth, between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about two miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Automobile bus connects with at least two daily trains at Canton Junction Station.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

NATIVITY AND PARENTAGE OF CHILDREN ADMITTED.

BIRTHPLACE.	Patient.	Father.	Mother.
Massachusetts . . . . .	51	12	11
Other New England States . . . . .	3	5	6
Other States . . . . .	1	—	1
Total native . . . . .	55	17	18
Other countries:			
Austria . . . . .	—	3	2
Armenia . . . . .	—	2	2
Canada . . . . .	2	5	5
Cape Verde Islands . . . . .	—	1	1
England . . . . .	—	3	2
Germany . . . . .	1	—	2
Greece . . . . .	—	1	1
Ireland . . . . .	—	4	6
Italy . . . . .	1	9	9
Lithuania . . . . .	—	1	1
Newfoundland . . . . .	—	1	1
Poland . . . . .	—	4	4
Russia . . . . .	1	2	2
Syria . . . . .	—	1	1
Total foreign . . . . .	5	37	39
Unknown . . . . .	—	6	3
Totals . . . . .	60	60	60

## DISABILITY ON ADMISSION.

	Boys.	Girls.	Total.
Amputation of arm . . . . .	1	—	1
Amputation of leg . . . . .	—	1	1
Amputation of legs . . . . .	2	—	2
Bone cyst of right humerus . . . . .	1	—	1
Congenital dislocation of hip . . . . .	1	—	1
Congenital deformity of right arm and both legs . . . . .	1	—	1
Congenital amputation of left arm . . . . .	—	1	1
Deformity of arm due to scald . . . . .	—	1	1
Gunshot wound of left knee . . . . .	1	—	1
Infantile paralysis . . . . .	8	11	19
Infectious arthritis . . . . .	—	2	2
Multiple arthritis . . . . .	1	—	1
Multiple joint disease . . . . .	—	1	1
Osteomyelitis . . . . .	1	—	1
Progressive muscular dystrophy . . . . .	1	—	1
Rachitic deformity . . . . .	—	2	2
Spastic paralysis . . . . .	2	2	4
Traumatic amputation of fingers of left hand . . . . .	1	—	1
Tuberculous disease of hip . . . . .	5	3	8
Tuberculous disease of knee . . . . .	1	2	3
Tuberculous disease of os calcis . . . . .	1	—	1
Tuberculous disease of spine . . . . .	4	1	5
Undiagnosed . . . . .	1	—	1
	33	27	60

## VALUATION.

Nov. 30, 1921.

## REAL ESTATE.

Land, 165.72 acres . . . . .	\$27,517 25
Administration building with added wing and extension, two dormitories and power house . . . . .	174,069 89
Equipment for heat, light and power . . . . .	7,058 47
Infirmary . . . . .	23,849 77
Infirmary for State minor wards . . . . .	56,389 17
Industrial building . . . . .	12,478 10
Assembly hall . . . . .	29,812 91
Girls' cottage . . . . .	6,133 68
Boys' cottage . . . . .	12,559 08
New girls' cottage . . . . .	11,655 50
Employees' cottage . . . . .	6,140 46
New barn . . . . .	5,995 01
Cow barn with silos . . . . .	3,250 88
Milk house . . . . .	761 38
Henhouse . . . . .	30 00
Henhouses . . . . .	863 14
Garage . . . . .	1,954 01
Piggery . . . . .	3,005 05
Ice house . . . . .	904 19
Shop . . . . .	150 00
Fairbanks scales . . . . .	745 31
Granolithic walks . . . . .	3,438 92
Water system . . . . .	8,597 46
Filter beds . . . . .	1,295 00
Telephone wires . . . . .	391 62
	<hr/>
	\$399,046 25

## PERSONAL PROPERTY.

Travel, transportation and office expenses . . . . .	\$776 10
Food . . . . .	6,644 96
Clothing and materials . . . . .	9,401 82
Furnishings and household supplies . . . . .	35,469 30
Medical and general care . . . . .	6,896 74
Heat, light and power . . . . .	3,534 79
Farm . . . . .	18,416 31
Garage, stable and grounds . . . . .	6,345 05
Repairs, ordinary . . . . .	5,206 84
	<hr/>
	\$92,691 91



## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1921: —

### CASH ACCOUNT.

Balance Dec. 1, 1920 . . . . .	\$1,374 05
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### *Receipts.*

#### *Income.*

#### Board of inmates:

Private . . . . .	\$1,745 88	
Cities and towns . . . . .	34,986 52	
Reimbursements, charitable, State		
minor wards . . . . .	10,195 51	
		\$46,927 91

#### Personal services:

Reimbursement from Board of Retirement . . . . .	49 55
--	-------

#### Sales:

Food . . . . .	\$31 24
Clothing and materials . . . . .	73 15
Furnishings and household supplies . . . . .	14 00
Medical and general care . . . . .	9 98

#### Farm:

Cows and calves . . . . .	\$79 50
Sundries . . . . .	64
	80 14

Repairs, ordinary . . . . .	73 58
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282 09

#### Miscellaneous:

Interest on bank balances . . . . .	\$183 67
Sundries . . . . .	88 93

272 60

47,532 15

#### Other receipts:

Refunds of previous year . . . . .	50 00
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#### *Receipts from Treasury of Commonwealth.*

#### Maintenance appropriations:

Balance of 1920 . . . . .	\$6,315 23	
Advance money (amount on hand November 30) . . . . .	12,000 00	
Approved schedules of 1921 . . . . .	129,484 97	
		147,800 20

Special appropriations . . . . .	68,712 42
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Total . . . . .	\$265,468 82
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*Payments.*

## To treasury of Commonwealth:

Institution income . . . . .	\$47,532 15	
Refunds, account of maintenance . . . . .	31 51	
Refunds of previous year . . . . .	50 00	
		<hr/>
		\$47,613 66

## Maintenance appropriations:

Balance of schedules of previous year . . . . .	\$7,689 28	
Eleven months' schedules, 1921 . . . . .	\$129,484 97	
Less returned . . . . .	31 51	
		<hr/>
	129,453 46	
November advances . . . . .	7,326 66	
		<hr/>
		144,469 40

## Special appropriations:

Approved schedules . . . . .	\$56,712 42	
November advances . . . . .	194 00	
		<hr/>
		56,906 42

## Balance Nov. 30, 1921:

In bank . . . . .	\$4,403 63	
In office . . . . .	12,075 71	
		<hr/>
		16,479 34

Total . . . . .		<hr/>
		\$265,468 82

## MAINTENANCE.

Balance from previous year, brought forward . . . . .	\$179 29	
Appropriation, current year . . . . .	151,860 00	

Total . . . . .	\$152,039 29	
Expenses (as analyzed below) . . . . .	143,715 52	

Balance reverting to treasury of Commonwealth . . . . .	\$8,323 77	
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*Analysis of Expenses.*

## Personal services:

John E. Fish, M.D., superintendent . . . . .	\$4,500 00	
Medical . . . . .	3,780 00	
Administration . . . . .	4,548 90	
Kitchen and dining-room service . . . . .	6,683 43	
Domestic . . . . .	9,024 73	
Ward service (male) . . . . .	1,362 55	
Ward service (female) . . . . .	13,471 54	
Industrial and educational department . . . . .	7,451 90	
Engineering department . . . . .	7,360 58	
Repairs . . . . .	3,858 23	
Farm . . . . .	3,986 41	
Stable, garage and grounds . . . . .	3,913 49	
		<hr/>
		\$69,941 76

## Religious instruction:

Catholic . . . . .	\$520 00	
Hebrew . . . . .	520 00	
Protestant . . . . .	510 00	
		<hr/>
		1,550 00

Amount carried forward . . . . .		<hr/>
		\$71,491 76

*Amount brought forward* . . . . . \$71,491 76

Travel, transportation and office expenses:

Postage . . . . .	\$277 08
Printing and binding . . . . .	291 38
Printing annual report . . . . .	65 83
Stationery and office supplies . . . . .	369 83
Telephone and telegraph . . . . .	380 81
Travel . . . . .	359 65
Freight . . . . .	17 33

1,761 91

Food:

Flour . . . . .	\$2,487 71
Cereals, rice, meal, etc. . . . .	394 37
Bread, crackers, etc. . . . .	145 58
Peas and beans (canned and dried) . . . . .	406 97
Macaroni and spaghetti . . . . .	36 93
Potatoes . . . . .	1,721 80
Meat . . . . .	5,630 56
Fish (fresh, cured and canned) . . . . .	1,248 35
Butter . . . . .	3,147 96
Butterine, etc. . . . .	212 14
Peanut butter . . . . .	12 37
Cheese . . . . .	117 78
Coffee . . . . .	189 78
Tea . . . . .	133 53
Cocoa . . . . .	143 33
Eggs (fresh) . . . . .	554 79
Egg powders, etc. . . . .	28 75
Sugar (cane) . . . . .	1,165 98
Fruit (fresh) . . . . .	874 57
Fruit (dried and preserved) . . . . .	1,648 45
Lard and substitutes . . . . .	295 57
Molasses and syrups . . . . .	86 56
Vegetables (fresh) . . . . .	108 09
Vegetables (canned and dried) . . . . .	368 23
Seasonings and condiments . . . . .	337 02
Yeast, baking powder, etc. . . . .	183 23
Sundry foods . . . . .	188 56
Freight . . . . .	463 56

22,332 52

Clothing and materials:

Boots, shoes and rubbers . . . . .	\$967 37
Clothing (outer) . . . . .	368 18
Clothing (under) . . . . .	491 95
Dry goods for clothing . . . . .	513 19
Hats and caps . . . . .	6 00
Leather and shoe findings . . . . .	206 54
Socks and smallwares . . . . .	260 18
Freight . . . . .	18 78

2,832 19

Furnishings and household supplies:

Beds, bedding, etc. . . . .	\$1,049 38
Carpets, rugs, etc. . . . .	214 03
Crockery, glassware, cutlery, etc. . . . .	533 48

*Amounts carried forward* . . . . . \$1,796 89      \$98,418 38

*Amounts brought forward* . . . . . \$1,796 89 \$98,418 38

Furnishings and household supplies — *Concluded.*

Electric lamps . . . . .	121 55	
Furniture, upholstery, etc. . . . .	347 93	
Kitchen and household wares . . . . .	889 00	
Laundry supplies and materials . . . . .	1,120 67	
Lavatory supplies and disinfectants . . . . .	110 99	
Table linen, paper napkins, towels, etc. . . . .	203 86	
Sundries . . . . .	37 95	
Freight . . . . .	66 74	
	<hr/>	4,695 58

Medical and general care:

Books, periodicals, etc. . . . .	\$152 34	
Entertainments, games, etc. . . . .	321 23	
Gratuities . . . . .	31 00	
Ice and refrigeration . . . . .	332 62	
Laboratory supplies and apparatus . . . . .	162 88	
Manual training supplies . . . . .	28 61	
Medicines (supplies and apparatus) . . . . .	1,341 92	
School books and supplies . . . . .	203 57	
Tobacco, pipes, matches . . . . .	11 78	
Water . . . . .	784 10	
Sundries . . . . .	59 00	
Freight . . . . .	49 83	
	<hr/>	3,478 88

Heat, light and power:

Coal (bituminous) . . . . .	\$5,525 94	
Freight and cartage . . . . .	7,744 10	
Coal (anthracite) . . . . .	463 49	
Freight and cartage . . . . .	361 46	
Oil . . . . .	65 87	
Operating supplies for boilers and engines . . . . .	818 26	
Sundries . . . . .	6 42	
Freight . . . . .	11 56	
	<hr/>	14,997 10

Farm:

Bedding materials . . . . .	\$373 78	
Blacksmithing and supplies . . . . .	163 26	
Carriages, wagons and repairs . . . . .	152 56	
Dairy equipment and supplies . . . . .	26 62	
Fencing materials . . . . .	340 15	
Grain, etc. . . . .	4,695 93	
Hay . . . . .	3,329 97	
Harnesses and repairs . . . . .	56 80	
Horses . . . . .	935 00	
Other live stock . . . . .	287 00	
Spraying materials . . . . .	43 31	
Stable and barn supplies . . . . .	166 09	
Tools, implements, machines, etc. . . . .	479 02	
Trees, vines, seeds, etc. . . . .	232 78	
Veterinary services, supplies, etc. . . . .	114 00	
Sundries . . . . .	6 00	
Freight . . . . .	24 89	
	<hr/>	11,427 16

*Amount carried forward* . . . . . \$133,017 10

*Amount brought forward* . . . . . \$133,017 10

Garage, stable and grounds:

Motor vehicles . . . . .	\$1,743 50
Automobile repairs and supplies . . . . .	2,701 96
Labor (not on pay roll) . . . . .	24 00
Spraying materials . . . . .	39 36
Trees, vines, seeds, etc. . . . .	15 50
Sundries . . . . .	2 00
Freight . . . . .	9 93

4,536 25

Repairs, ordinary:

Brick . . . . .	\$71 80
Cement, lime, crushed stone, etc. . . . .	278 50
Electrical work and supplies . . . . .	120 49
Hardware, iron, steel, etc. . . . .	397 24
Labor (not on pay roll) . . . . .	582 38
Lumber, etc. (including finished products) . . . . .	687 12
Paint, oil, glass, etc. . . . .	880 55
Plumbing and supplies . . . . .	511 51
Roofing and materials . . . . .	40 25
Steam fittings and supplies . . . . .	625 70
Tools, machines, etc. . . . .	95 75
Sundries . . . . .	185 75
Freight . . . . .	100 66

4,577 70

Repairs and renewals:

Finishing old barn . . . . .	\$450 95
Granolithic walks and gates, . . . . .	1,133 52

1,584 47

Total expenses for maintenance . . . . . \$143,715 52

SPECIAL APPROPRIATIONS.

Balance Dec. 1, 1921 . . . . .	\$90,000 00
Appropriations for current year . . . . .	75,000 00

Total . . . . .	\$165,000 00
Expended during the year (see statement below) . . . . .	68,712 42

Balance Nov. 30, 1921, carried to next year . . . . . \$96,287 58

OBJECT.	Act or Resolve.	Whole Amount.	Ex- pended during Fiscal Year.	Total expended to Date.	Balance at End of Year.
Purchase of land . . .	Acts of 1920, chapter 384.	\$15,000 00	\$12,517 25	\$12,517 25	\$2,482 75
Buildings for State minor wards.	Acts of 1920, chapter 629; Acts of 1921, chapter 502.	150,000 00	56,195 17	56,195 17	93,804 83
		\$165,000 00	\$68,712 42	\$68,712 42	\$96,287 58

## RESOURCES AND LIABILITIES.

*Resources.*

Cash on hand . . . . .	\$16,479 34	
November cash vouchers (paid from advance money):		
Account of maintenance . . . . .	\$7,326 66	
Account of special appropriations . . . . .	194 00	
	<hr/>	7,520 66
		<hr/>
		\$24,000 00
Due from treasury of Commonwealth from available appropriation		
account November, 1921, schedule . . . . .		2,262 06
		<hr/>
		\$26,262 06

*Liabilities.*

Outstanding schedules of current year:		
Schedule of November bills . . . . .	\$14,262 06	
Purchase of land . . . . .	12,000 00	
	<hr/>	
		\$26,262 06

## PER CAPITA.

During the year the average number of inmates has been 279.62.  
 Total cost for maintenance, \$143,715.52.  
 Equal to a weekly per capita cost of \$9.8839.  
 Receipts from sales, \$282.09.  
 Equal to a weekly per capita of \$0.0194.  
 All other institution receipts, \$47,250.06.  
 Equal to a weekly per capita of \$3.2497.  
 Net weekly per capita cost, \$6.6148.

Respectfully submitted,

JOHN E. FISH,  
*Treasurer.*

Examined and found correct as compared with the records in the office of the Auditor of the Commonwealth.

ALONZO B. COOK,  
*Auditor.*





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The Commonwealth of Massachusetts

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ANNUAL REPORT

OF THE

TRUSTEES OF THE MASSACHUSETTS  
HOSPITAL SCHOOL

FOR THE

YEAR ENDING NOVEMBER 30, 1923

---

DEPARTMENT OF PUBLIC WELFARE

LIBRARY OF THE  
Massachusetts Agricultural College  
AMHERST, MASS.



# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL.

### TRUSTEES.

EDWARD H. BRADFORD, M.D., BOSTON.  
LEONARD W. ROSS, *Secretary*, TAUNTON.  
WILLIAM F. FITZGERALD, BROOKLINE.  
WALTER C. BAYLIES, TAUNTON.  
ANDREW MARSHALL, JAMAICA PLAIN.

### RESIDENT OFFICERS.

JOHN E. FISH, M.D., *Superintendent and Treasurer*.  
ORA G. DANIELS, M.D., *Assistant Physician*.  
LYSANDER S. KEMP, M.D., *Assistant Physician*.  
C. GLENN BARBER, M.D., *Assistant Physician*.  
MARIE C. ALKON, D.M.D.,<sup>1</sup> *Dentist*.  
MABEL J. GODDARD, *Chief Clerk*.  
MARGARET MACDONALD, R.N., *Head Nurse*.  
ALEXSANDRAENA RUDLAND, *Supervising Nurse*.  
MILDRED L. SUKEFORTH, *Supervising Nurse*.  
E. BERNICE CARTER, R.N., *Supervising Nurse*.  
CORA E. RICHARDSON, *Head Teacher*.  
LILLIAN S. SWIMM, *Head Matron*.  
WILLIAM H. COFFIN, *Chief Engineer*.  
JESS BLACK, *Farmer*.

## The Commonwealth of Massachusetts

### REPORT OF THE TRUSTEES.

*To His Excellency the Governor and the Honorable Council.*

The Trustees of the Massachusetts Hospital School beg leave to submit the following report:—

They desire to call special attention to some features of the work of the institution which need careful consideration to advance the excellent work already done by the school. The most gratifying, and at the same time the most surprising, feature of the work of the institution has been its success in the training and education of a class doomed to illiteracy or inadequate knowledge. If a child cured of tuberculous disease of the spine, or of the hip joint, is obliged to pass through several years of invalidism during which he is deprived of the ordinary educational advantages offered by the State to the children of the Commonwealth he has in addition to his physical handicap the handicap of ignorance. The purpose of the school as originally planned was to furnish education to this class to the degree that their physical disabilities would permit. At the outset the trustees were unable to determine what method of education was adapted to children of feeble strength and how much they could be schooled without injuring their health or delaying the desired recovery or convalescence. It was supposed that anything like the ordinary amount of school teaching or the confinement of school hours would be detrimental to the welfare of this class of cripples. The accommodations planned originally for school rooms and in school equipment were therefore less complete than those ordinarily arranged in the grammar schools throughout the State.

The experience gained in the last fifteen years in the work of the school has determined the fact that not only can this class of cripples receive the same amount

<sup>1</sup> Non-resident.

of education as that given to normal children, provided the teaching is properly regulated as that furnished ordinarily in public grammar schools. It has been found that many children, after finishing the several years course of residence at the school and regaining health with substantial cure of their bone tuberculosis, or bone deformity, have been able to enter high school courses at the same age and grade of their healthy brothers and sisters or even to show a better knowledge. The same may be said of the paralytic and permanent cripple. In both these cases it is manifestly necessary, if they can be brought to a condition of self-support in adult life, that their mental equipment be of the best. The records obtained from the alumni association have been of much value and assistance in determining the advantage to children of this class, of the instruction and training obtained in the Hospital School, and based upon the results of these records, the trustees would again emphasize the need of better school equipment than was originally thought to be necessary.

It will be found on examination of the institution that the school equipment is meagre and limited; that there are but four small school rooms for approximately three hundred pupils which necessitates crowding and repeated shifts, taxing the teaching power of the instructors; nor is the teaching equipment at all comparable to that which is necessary. An additional fact is to be noted; owing to the success of the work of the school, the pupils now brought to the institution are younger than was the case in the first years, before the benefit of the school was generally known. This requires a different arrangement of rooms and of instruction than was thought necessary at first. The trustees feel that no feature of the charities of the Commonwealth is as satisfactory, gratifying or important as the educational work carried on in the Hospital School. Children rescued from almshouse conditions as physical wrecks have been developed to lives of financial independence in a large number of cases. In nearly 75% of the children, graduates of the institution, this gratifying result has been obtained. It is for this reason that the trustees desire to emphasize the need of a proper school building to meet changing conditions and to still further develop efficiency of the hitherto neglected cripple.

As it is thought that there are still a large number of educationally neglected crippled children in various parts of the State the trustees recommend the employment of a field worker who would be able to canvass the State and give aid to a long neglected class.

The trustees recommend a change in the law to increase the rate of board from \$4 to \$6 per week and would also call attention to the needs of the institution as given in the report of the Superintendent.

Reference should also be made to the successful work of the infirmary for State Minor Wards which, by an Act of Legislature, was added to the work of the school. This has been carried on successfully through the past year without interfering in any way with the education and training of the pupils of the school proper.

The superintendent's and treasurer's report are hereunto annexed and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD.  
LEONARD W. ROSS.  
WILLIAM F. FITZGERALD.

WALTER C. BAYLIES.  
ANDREW MARSHALL.

## SUPERINTENDENT'S REPORT TO THE TRUSTEES OF THE MASSACHUSETTS HOSPITAL SCHOOL.

The education of crippled and deformed children can no longer be regarded as an experiment in Massachusetts. The records of nearly one thousand cases are now available for study not only as to the wisdom of providing treatment and educational opportunities for such children as a matter of simple justice, but also as to the economic value to the Commonwealth of specialized training of many who would otherwise never be able to gain a livelihood. While the benefits resulting from the training the school is organized to give can hardly be fully appraised, the importance of the function of the school can be appreciated, when it is known that every pupil enrolled is required to present a physician's certificate of physical unfitness for ordinary school attendance and that a very large majority of those



who are discharged leave for lives of usefulness, to share in the common interests of the community.

It is gratifying to report that the majority of those who have been discharged from the school have entered into successful competition with wage earners and associates not physically handicapped. Scores of graduates of the school have maintained creditable standing in public high schools with no other previous training than that received here, and many of our older alumni who were unable to continue their education elsewhere, but went to work immediately after being discharged, have for several years, although permanently paralyzed and unable to walk without the aid of crutches, been self-supporting in such occupations as printing, tailoring, cobbling, bookkeeping, etc.

It was difficult to know at first, how to proceed with the education of such children, but with a fuller knowledge of the problem, certain principles began to emerge, by which the progress of our teachers has been governed. One of the first guiding principles has been to put the child in a proper attitude towards life; to eliminate self-pity, to develop character, and to teach the crippled child that physical disability is not the handicap he has been led to believe, but rather an inconvenience to be overcome. The entire life of the school has been developed with this idea constantly in mind. As this principle was developed, it was soon found that the need of teachers with a broad outlook was imperative, and that their efforts should not be restricted to the narrow sphere of any inflexible educational system. While the curriculum and methods of instruction have not been rigidly defined, the teachers have had no opportunity to fall into a routine by aimlessly blundering along. Since the appointment of the first teacher in January 1908, but two head teachers have been employed, both having been promoted after long experience which enabled them to determine the prognostic significance of many of the disabilities of the children to be trained. Under the able leadership of highly qualified head teachers a most harmonious and efficient teaching staff has been maintained.

### THE SCHOOL

now has a total enrollment of 230 pupils, an average of over 50 to each grade teacher. The number varies constantly, many children improving sufficiently to enter the public schools, and others being admitted as fast as there is room for them. It is our purpose to keep so closely in touch with the work of the public schools that these changes can be made with very little loss of time.

We have been fortunate in retaining our corps of grade teachers unchanged for the last three years, an item which means more to us than to public school workers, because it takes considerable training and experience to enable our teachers to cover the work of the grades in the short time allotted to them. The crippled condition of our pupils necessitates short class-room periods and that means utmost care in the weeding out of non-essentials, much thought in the selection and presentation of subject matter, and intense concentration on the part of teacher and pupil during school hours. When a teacher has successfully mastered these conditions, she is herself amazed at the amount of work that can be accomplished in one short hour.

Every year we turn out fifteen or twenty promising young citizens, a large majority of whom are capable of self-support. Many continue their education in high school or business college, while others enter upon vocations for which they have been especially trained. We are extremely proud of these courageous young people who are so splendidly holding their own in the race of life.

Our girls have an unusual opportunity to study domestic science. Making their home in a well-equipped cottage, they are taught every detail of the housewife's art. They learn to cook delicious, wholesome food; to launder and repair their garments; to keep the house immaculate; and when they return to their own homes they are able to be of great assistance to their parents.

In needlework, also, our girls excel. Beginning with simple articles when they are in the second grade, they gradually increase in efficiency until at the time of graduation they are able to make their entire outfit.

Our music department continues to be a source of pleasure and profit to employees as well as pupils. Besides the regular singing classes for the whole school, 20 pupils have special instruction in voice training, and 12 are taking piano lessons.

Several fine concerts have been given which were highly appreciated by all music lovers.

The printing department has turned out some very fine work this year. All our programs and invitations have been printed with exquisite taste and neatness. In this department several of our boys have laid the foundation for what bids fair to be their life work.

In the manual training classes our children are taught toy-making, book-binding, and card-board construction. The instructor in charge of this department also teaches mechanical drawing and designing.

So our children pass from one pleasant occupation to another, developing along many lines, happy in the consciousness of work well done, and in the prospect of future usefulness.

There were 24 graduates in the class of 1923, of whom 11 are now attending public high schools; 3 are soon to be discharged as capable of self-support, and 10 in need of further treatment will remain for continuation work along practical lines.

An effort has been made to keep in touch with all graduates by means of correspondence, the Alumni Association, and the encouragement of return visits, which are enjoyed by a large number of those who can return to their homes the same day, and a few, who by special arrangement, remain over night, or make week end visits. It is desirable that this friendly interest and close relationship between the school and its graduates be maintained, but the numbers have outgrown the methods heretofore employed and the appointment of a field worker should now be made, to give encouragement and advice to certain discharged cases and look up applicants for admission.

Such a worker, if trained and educated at the school, would be thoroughly familiar with its purposes, organization, and methods, and would also be able to influence public opinion, so that there might be a better understanding of a graduate's capacity for self-support, on the part of employers, and a clearer insight into the cripple's probable future on the part of parents and public officials.

Charitable organizations, and the public generally, should not be more familiar with the road towards the institution than with the one from the school to the community to which trained cripples must return. The enthusiasm with which some persons arrange for the admission of a crippled child, and the indifference with which the same individual regards the child's discharge when the school has done its part, is doubtless due to ignorance of a well trained graduate's capacity, and this lack of knowledge can best be supplied by the graduates themselves, with whose success and capacity for self-support the institution should also be guided in its organization and development for others.

By the appointment of a field worker the institution would not only be rendering a very great service to its graduates but more fully meeting its community obligations as well.

In these days when so much emphasis is made upon the importance of applying sharply defined business methods to hospitals and institutions of learning, it should be borne in mind that well managed commercial concerns, which mark up the selling price proportionate to the cost of production, are not justly comparable, in some respects at least, to the humanitarian interests of a public charitable institution which has no selling price. Of what value to the community is the economic freedom of a wheel chair paralytic? The cost of maintaining such a case in an almshouse has been fairly well fixed. One of the most striking examples of what the school is doing for boys and girls facing a life of complete dependency may be found in a boy who entered the school at the age of twelve years because infantile paralysis had deprived him of the use of both legs. As a printer he has been the chief wage earner of his family for the past five years.

#### THE HOSPITAL

represents a carefully planned attempt to provide prompt and efficient treatment for the acute surgical and medical cases occurring in the Child Guardianship Division of the Department of Public Welfare. Under the provisions of Chapter 121, section 35, of the General Laws, "No State ward who is insane, feeble-minded, epileptic, or otherwise unfit shall be admitted to or received at the said hospital", and with the hearty co-operation of the Director of Child Guardianship and his



large corps of able assistants there has been such practical compliance with the purpose of the law, during the first year it has been in operation, that there is no indication that the Bradford Infirmary will become an asylum home for incurables. Nevertheless, certain diseases, acute at the time of admission, are bound to become chronic, and although not incurable, may continue through a long protracted convalescence.

A comparatively large number of children have been referred for tonsil and adenoid operations as a regular routine. In the opinion of the medical staff, based upon several years' experience and the record of 1,148 cases in the school department, hypertrophied tonsils, an exceedingly common condition in children, do not necessarily indicate operative interference. A certain number of undernourished and physically weakened children, entered for tonsillectomies, should remain for dental work and other hygienic treatment instead. Some children suffering from disturbances of nutrition, for example, and others sent to us to be observed for appendicitis, but without symptoms to justify operation, should neither be returned to family care nor long detained for observation in an acute hospital ward.

It has not been found practicable to receive any of the sick minor wards into the school division for observation, or even during their convalescence, and although the infirmary has not been occupied to its capacity at any time during the year, any material increase in numbers would necessitate a more complete separation of the noisy restless convalescent children from the very sick or acute cases.

In the anticipation of a larger number of sick minor wards another year, preliminary plans have been made for two cottages for convalescents, for 60 children and the necessary employees, at an estimated cost of \$6,500 each.

Statistics for the sixteenth year show a decided increase in the whole number of children under treatment, while the daily average number remained practically unchanged. There were in the institution on December 1, 1922, 269 in the school department and 26 sick minor wards. There have been admitted to the school 69, and for hospital care 283. The whole number cared for during the year was 647; 338 as school and 309 as hospital cases. The maximum number in both departments at any one time was 344 on March 15; the minimum was 222 on December 25, and the daily average number 298.25.

The discharges numbered 372; classified as 100 school cases and 272 sick minor wards; leaving in the institution at the end of the year 275 children; 238 for care and training in the school and 37 for hospital treatment only. The average age on discharge was 12 years, 7 months and one day in the school department and 9 years, 10 months and one day in the hospital.

The average admission age to the school was 9 years, 3 months and 13 days and to the hospital 9 years, 8 months and 2 days, and there has been practically an even number of boys and girls, a slight increase from previous years in the number of girls.

The youngest child admitted to the school was 2 years; the oldest 16 years, 10 months, and to the hospital department the youngest was 6 months, and the oldest 19 years, 9 months. The

#### NATIVITY

table shows 282 patients, or 81+ per cent, were born in Massachusetts; 40 or 11+ per cent, were born in other parts of the United States; while only 8, or 2+ per cent, were foreign born. One hundred and fourteen fathers and 128 mothers were American born against 136 fathers and 154 mothers who were foreign born. The birthplace of 18 patients, 98 fathers and 66 mothers was unknown.

#### DIAGNOSIS ON ADMISSION.

	<i>School Department.</i>	Boys	Girls
Amputation of arm . . . . .		1	—
Amputation of leg . . . . .		1	1
Club feet . . . . .		3	—
Flat feet and round shoulders . . . . .		—	1
Fracture of elbow . . . . .		1	—
Fracture of spine . . . . .		1	—
Gunshot wound of knee . . . . .		2	—

	Boys	Girls
Hysterical hip . . . . .	—	7
Infantile paralysis . . . . .	9	7
Multiple arthritis . . . . .	—	1
Osteomyelitis . . . . .	8	1
Rickets . . . . .	1	4
Scoliosis . . . . .	1	—
Spastic paralysis . . . . .	—	1
Traumatic brachial paralysis . . . . .	1	—
Tuberculous disease of hip . . . . .	3	5
Tuberculous disease of hip and spine . . . . .	1	—
Tuberculous disease of knee . . . . .	1	1
Tuberculous disease of sacrum . . . . .	1	—
Tuberculous disease of spine . . . . .	2	1
Tuberculous disease of wrist . . . . .	—	1
Ununited fracture of femur . . . . .	1	—
Ununited fracture of femur and spastic paralysis . . . . .	1	—
	39	25

*Hospital Department.*

Anemia, secondary . . . . .	1	—
Appendicitis . . . . .	4	4
Bronchitis . . . . .	—	1
Bronchopneumonia . . . . .	1	1
Cellulitis . . . . .	1	—
Cervical adenitis . . . . .	—	1
Chicken-pox . . . . .	—	1
Chorea . . . . .	1	3
Club feet . . . . .	1	—
Conjunctivitis . . . . .	2	—
Contracture of finger . . . . .	1	—
Dermatitis rhus toxicodendron . . . . .	1	—
Diphtheria . . . . .	7	3
Eczema . . . . .	1	1
Empyema . . . . .	1	—
Endocarditis . . . . .	—	2
Enuresis . . . . .	4	1
Flat feet . . . . .	1	—
Follicular tonsillitis . . . . .	—	1
Fracture, pattelar tubercle . . . . .	—	1
Gonorrhea . . . . .	—	12
Hernia . . . . .	4	2
Herpes facialis . . . . .	—	1
Horn nail on toe . . . . .	—	1
Hydrocele . . . . .	1	—
Hypochondria . . . . .	—	1
Ichthyosis . . . . .	1	—
Infected insect bites . . . . .	1	1
Infection of finger . . . . .	1	—
Imperforate hymen . . . . .	—	1
Impetigo contagiosa . . . . .	16	8
Lax ligaments of knee . . . . .	—	1
Malformation of sacroiliac sychondrosis . . . . .	—	1
Malnutrition . . . . .	—	1
Masturbation . . . . .	1	—
Mitrol regurgitation . . . . .	—	1
Myocarditis . . . . .	—	1
Nasal polypus . . . . .	1	—
Nephritis, acute . . . . .	—	1
Neurasthenia . . . . .	—	1
No disease . . . . .	3	—

	Boys	Girls
Osteogenesis imperfectus . . . . .	—	1
Osteomyelitis . . . . .	—	1
Otitis media . . . . .	7	4
Pericarditis . . . . .	—	1
Perimetritis . . . . .	—	1
Phimosis . . . . .	11	1
Progressive muscular dystrophy . . . . .	1	—
Psoriasis . . . . .	—	1
Rhinitis, atrophic . . . . .	1	1
Rickets . . . . .	2	4
Ringworm . . . . .	4	—
Scabies . . . . .	31	21
Scoliosis . . . . .	1	1
Spastic paralysis . . . . .	2	—
Stricture of esophagus . . . . .	1	—
Sublingual cyst . . . . .	—	2
Syphilis, congenital . . . . .	8	4
Tonsils and adenoids, hypertrophied . . . . .	56	61
Trophic ulcers on foot . . . . .	1	—
Tuberculous dactylitis . . . . .	—	1
Tuberculous disease of knee . . . . .	—	1
Tuberculous axillary glands . . . . .	—	1
Vaginitis . . . . .	—	4
Vincent's angina . . . . .	1	—
Undiagnosed . . . . .	1	—
	184	165

Cultures from the throats of children admitted to the hospital department at various times throughout the year, revealed positive diphtheria in 4 cases and 7 other children, and 3 employees contracted the disease, all making good recoveries. An employee's child developed measles on November 21, 1922, and communicated the disease to 15 other children before the first case was diagnosed and quarantined. There were also 25 cases of chicken-pox, 1 case of German measles and 2 cases of mumps.

There were 6 deaths during the year, as follows: Bronchopneumonia, one case; pleuropneumonia, one case; tuberculous disease of the spine and amyloid degeneration of kidneys and liver, two cases; syncope while under the influence of ether administered as a surgical anesthesia and enlarged thymus found at autopsy, one case; acute cardiac dilatation and progressive muscular dystrophy, one case.

Surgical operations were performed as follows: Appendectomy, 10; astragalectomy, 2; circumcision, 11; correction of club feet, 3; dilatation and curettage of uterus, 1; excision of femoral head with drainage, 1; herniotomy (inguinal), 5; herniotomy (umbilical), 1; incision and drainage of abscess, 2; manipulation of feet, 1; osteotomy of femur (Macewen), 1; plastic operation of hand, 1; removal of tonsils and adenoids, 99; removal of nasal polypus, 1; reduction of dislocated hip, 1; rib resection with drainage for empyema, 2; sequestrectomy (humerus), 1; tendon transplant (foot), 1; undescended testicle, 1.

#### THE DENTIST

has organized a definite clinical system so that it will be possible in the future for each school patient to be examined and all necessary work done at least twice each year. Each patient sent to the dentist has been given a half hour appointment and in addition to the reparative work done, instruction in oral hygiene has been given. The dentist has introduced special charts of each patient with a view to obtaining data for dental research. The dental clinic has to its credit the following amount of work accomplished during the year: 947 appointments; 150 patients fully completed; 531 amalgam fillings; 278 cement fillings; 141 zinc oxide fillings; 35 synthetic fillings; 47 neo balsam fillings; 183 prophylaxis; 240 extractions; 18 post operative treatments; 19 root canal treatments; 4 root canal fillings; 5 Vincent angina treatments; 1 Vincent's smear; 15 silver reduction treatments; 1 tooth lanced; 2 abscesses lanced; 5 cases general anesthetic; 67 research charts.

The elaborate statistics now required to determine whether or not institution farms show a justifiable profit are apt to be misleading, especially when compared to the records of other farms maintained primarily as such.

### THE FARM

is a very necessary adjunct to the institution, for without it, the labor of men and teams would not easily be available for much indispensable institution work. An average of 8 men has been employed upon the farm during the past year and 9,040 hours of their time have been occupied in such work as delivering freight, coal and provisions; removing ashes, garbage and rubbish; harvesting and distributing ice; breaking roads and shoveling paths in the winter; mowing lawns and fighting forest fires in the summer; supplying sand and gravel to the masons; caring for the filtration sewage beds; excavating for steam and water mains; cleaning chimneys; building roads; grading, etc. In addition to the above work which is of primary importance, the farm accounts show that 76,282 quarts of milk were produced at a cost of  $6\frac{1}{2}$  cents, and the farm, gardens, dairy, piggery and poultry show an estimated gain of \$5,572.35 with the following list of

#### *Products of the Farm.*

Ensilage, 175 tons; green feed and fodder, 78 tons; potatoes, 433 bushels; asparagus, 124 pounds; string beans, 13 bushels; shell beans, 26 bushels; dry beans,  $1\frac{1}{4}$  bushels; beets,  $88\frac{1}{2}$  bushels; beet greens, 68 bushels; cabbage,  $49\frac{1}{2}$  hundredweight; carrots, 78 bushels; cauliflower, 13 bushels; celery,  $9\frac{1}{2}$  bushels; Swiss chard, 74 bushels; sweet corn,  $135\frac{1}{2}$  bushels; cucumbers,  $56\frac{1}{2}$  bushels; egg plant,  $1\frac{1}{4}$  barrels; endive, 76 pounds; lettuce, 50 bushels; onions,  $32\frac{1}{2}$  bushels; parsnips, 20 bushels; peas,  $36\frac{1}{2}$  bushels; peppers,  $5\frac{1}{4}$  bushels; radishes, 35 pounds; rhubarb, 1,056 pounds; spinach,  $73\frac{1}{2}$  pounds; squash (summer), 21.8 hundredweight; squash (winter), 33.6 hundredweight; tomatoes,  $123\frac{1}{2}$  bushels; turnips,  $176\frac{1}{2}$  bushels.

The plans and specifications which were prepared last year as a basis for my recommendations and your request for an appropriation of \$44,335 to enlarge the boiler house and laundry and install a 72 inch horizontal tubular boiler, additional laundry machinery, a 50 horse power engine, 35 kilowatt generator and recirculating hot water system, were modified to provide for a 300 horse power water tube boiler and a separate laundry building for which an appropriation of \$42,845 was made; chapter 434, Acts of 1923.

The question of increased boiler capacity has been considered in various plans. The problem has been complicated as the boiler house is a two-story building in which the laundry is on the floor over the boilers. The immediate needs were quite as much increased laundry space as increased boiler capacity. Plans and estimates were submitted to the Commission on Administration and Finance for an extension of the old laundry over old foundations, and an addition to the present boiler battery (3-54" return tubular boilers) of 1-72" return tubular boiler. This we estimated would adequately provide for future needs for a considerable period of years under normal conditions. However, the Commission advised adversely and recommended a plan to include a new boiler to more than double the original capacity and a new laundry building away from the power plant altogether. A new laundry has been built to group with the administration building and screens the kitchen yard. It is a low brick building 40 x 63 with an open timber hip roof carrying a monitor. The floor is of granolithic on a gravel fill and connects at one end to the service tunnel built last year in connection with the Bradford Infirmary, which provides easy access to the steam and electric mains for power for the laundry machinery. The equipment layout is for 4 washers, 2 extractors, 1 drying room, 1 dry tumbler, 1 mangle, 2 pressers, 5 ironing tables, 2 starch kettles, sorting racks, store closet and employees' conveniences. The laundry should be ready for use early in the coming year, and promises to be a distinct addition to the plant.

The power plant is being increased with a 300 horse power water tube boiler. This is housed in an extension to the old boiler house 20 feet wide, 45 feet deep and 28 feet high, all of brick and fireproof construction carrying a monitor roof.

The new boiler involves a new flue and a new connection into our old chimney. An order has been placed for a wrought iron flue, 36" x 56", covered with magnesia



and water proofing and supported on iron columns. This will be run outside, behind the old boiler house.

A new chimney will have to be built in the near future, as it is doubtful if our present chimney will carry this new boiler to advantage. The new flue now being installed is therefore a makeshift.

It may be possible to procure a secondhand engine and generator by transfer from another institution with the small balance of the appropriation which will be available but an additional appropriation of \$2,300 should be made for the recirculating hot water system.

Your request for \$10,000 for remodelling the old infirmary, to provide accommodations for the additional nurses demanded by the sick minor wards, was met by an appropriation of \$7,000; chapter 434, Acts of 1923. The remodelling has been completed within the amount available but the small balance will not be sufficient for the necessary furnishings for which an additional sum of \$1,000 should be requested.

Aside from the numerous minor repairs and improvements made under the appropriation for maintenance for the year, the granolithic sidewalk on Randolph Street, for the construction of which the town of Canton bore one half the expense, was extended a distance of 775 feet, and other granolithic walks were laid to the assistant physicians' new apartments at the nurses' home. With boards sawed from logs of our own cutting and some accumulated lumber, the carpenters have built a small shed for farm implements and a very serviceable four-car garage for the assistant physicians' automobiles.

The kitchen chimney in the administration building was found to be defective during the summer and was practically rebuilt and the lining, which formerly went only to the roof, carried through to the top.

Repairs should be made another year to the kitchen floor in the administration building, which can be made serviceable by patching, but it would doubtless be an economy to replace the old maple floor altogether with quarry tile, which can be laid at an approximate cost of \$860.

Your attention is respectfully called to the need for increased water pressure for the town water main in case of fire which our high pressure tank could not control. The condition may be briefly stated as follows: We have a 6" town water supply main running down to our administration building, from which water is distributed to our entire plant. The elevation of our buildings is so near the height of the town standpipe that we are unable to get sufficient pressure for adequate protection in case of fire, and at times the pressure is too low to meet our ordinary needs. Not wishing to pay for water without pressure, an effort was made to secure a supply by drilling an artesian well to a depth of 425 feet, and erecting a 30,000 gallon tank at a height of 100 feet upon a steel tower. Our well yielded about 15 gallons per minute for the first few years, but its capacity has now dropped to approximately 12 gallons per minute, while our consumption has increased with the growth of our plant.

We are now using all the water we can supply from our well and what more is necessary we secure from the town, both supplies entering into our distribution system. We have a 6" fire protection main with hydrants around our buildings and with the 30,000 gallon tank filled we are well protected for a half hour or more, depending upon the number of hydrants used. As the first few minutes are the most important ones in case of fire, and as we were prepared to meet a fire emergency until the town apparatus could reach us, we felt fairly secure, especially when the town had a steam fire engine. The town has now disposed of its steamer and has motorized hose wagons. The town apparatus could reach us more quickly than before, but with no steamer, and with but thirty pounds pressure in our town main, we would be quite helpless after our 30,000 gallon tank was emptied.

After very careful study of the situation, I believe it would seem desirable that we should follow the advice of our engineer, and install a fire pump of a capacity of one thousand gallons per minute, which will give us all the protection which the town's steamer heretofore gave. The cost of such a pump and its installation is estimated as follows: 1,000 gallon fire pump with pipe and fittings, \$2,000; additional pipe and fittings, \$1,000; one 6" water meter, \$450; labor (provided the work is done by and under the direction of our resident engineer), \$200; totalizing \$3,650.

## INCOME

for the year amounting to \$54,071.58 as compared to \$44,751.08 shows an increase over last year of \$9,320.50.

In consideration of the fact that there has been no change in the \$4 per week rate of board chargeable under chapter 497, Acts of 1909, it would now seem desirable that the rate be increased to a sum more consistent with the increased cost of living. While no definite statistics are available as to the number of parents who reimburse places of settlement for children not entered as private patients, who automatically become chargeable to towns and cities, it is probable that there are a large number of reimbursement cases. Any increase in the town and city rate should be kept within the means of the majority to prevent the removal of promising children by sensitive parents who prefer to keep their children at home to grow up in ignorance rather than to accept town or city aid. I would respectfully suggest your consideration of an increase in the rate of board from \$4 to \$6 per week.

Maintenance expenditures for the year amounted to \$169,373.30 which when divided by 298.25, the daily average number of patients, gives a weekly per capita cost of \$10.92.

By deducting the receipts from the total expenditures and again dividing by the daily average, the net per capita cost to the State was found to be \$7.43.

There have been few changes in the official family during the year and while the rotation of subordinates has been greater than might be considered desirable, the comparatively large number of experienced long-service employees, who feel a proprietary interest in the institution, have been available for promotion when vacancies in more important positions have occurred. The position of chief clerk was filled by the transfer of Miss Mabel J. Goddard, who has to her credit many years of similar work in the State service. Mrs. Lillian Swimm, familiar by long experience with the duties of housekeeper and dietitian, was returned to her former position and given an assistant by the promotion of Miss M. Grace Parnell, matron of the girls' cottage. After a most creditable service of seven years, Miss Mildred Sukeforth was advanced to the position of supervising nurse in the school department and Miss E. Bernice Carter, a graduate of the Lawrence General Hospital, was appointed supervisor at the Bradford Infirmary.

Reference has been made in previous reports to the need for a school building in place of the four school rooms which are entirely inadequate both as to capacity and to equipment. They were poorly planned originally, on the north side of two dormitories and separated only by a narrow corridor from noisy playrooms. They are not only without direct sunlight and proper ventilation, but were never intended to serve more than half the number of children now in the school.

Education is the chief object of the institution's activities and the value of a building which would add to the school's capacity for usefulness can hardly be overemphasized.

The east dormitory is admirably situated for a school center as it is easily accessible to all parts of the institution. Furthermore, the sixty-bed dormitory is not adapted to the needs of the large group of very young children now being received. A practical solution of the problem would appear to be two one-story cottages for small boys and a simple rearrangement of the east dormitory so that it could be used exclusively for school purposes. Another plan would be the erection of a new school building similar to the one built a few years ago by the town of Canton. The cost of either plan would be approximately \$65,000.

The school is indebted to a multitude of good friends who have given entertainments, books, flowers, toys, ice cream and literally hundreds of appropriate gifts at Christmas time. To Mr. A. Sydeman for his theatre party, which has become an annual affair, to which the citizens of the town generously provide automobile transportation; to Mrs. Augustus Hemenway for weekly motor trips to Franklin Park, and especially to the Norwood Lodge of Elks for their merriest of merry entertainments, we owe a large debt of thanks.

Respectfully submitted,

JOHN E. FISH, *Superintendent.*



## TERMS OF ADMISSION.

Crippled and deformed children of the Commonwealth, between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about 2 miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Automobile bus connects with two trains at Canton Junction station on Saturdays and Sundays.

Post-office address: Canton, Mass.

Applications for admission should be made to the superintendent.

*Nativity and Parentage of Children admitted.*

Birthplace	Patient	Father	Mother
Massachusetts . . . . .	282	64	77
Other New England States . . . . .	29	30	27
Other States . . . . .	11	20	24
Total native . . . . .	322	114	128
Other countries:			
Austria . . . . .	—	2	4
Armenia . . . . .	—	1	1
Azores . . . . .	—	2	1
Barbadoes . . . . .	—	3	2
Canada . . . . .	3	30	33
England . . . . .	—	4	11
France . . . . .	—	1	1
Finland . . . . .	—	5	5
Germany . . . . .	—	1	—
Greece . . . . .	2	4	4
Ireland . . . . .	—	5	12
Italy . . . . .	1	40	35
Lithuania . . . . .	—	5	6
Poland . . . . .	1	12	14
Portugal . . . . .	—	2	4
Russia . . . . .	—	9	14
Scotland . . . . .	1	4	4
Serbia . . . . .	—	3	2
Sweden . . . . .	—	3	1
Total foreign . . . . .	8	136	154
Unknown . . . . .	18	98	66
	348	348	348

## VALUATION.

Nov. 30, 1923.

*Real Estate.*

Buildings . . . . .	\$520,902 83	
Land . . . . .	28,042 25	
		\$548,945 08

*Personal Property.*

Travel, transportation and office expenses . . . . .	\$1,628 56
Food . . . . .	5,339 00
Clothing and material . . . . .	7,414 56
Furnishings and household supplies . . . . .	44,640 00
Medical and general care . . . . .	9,341 59
Heat, light and power . . . . .	7,864 86

P.D. \$2		13
Farm	\$16,465 42	
Garage, stable and grounds	6,871 48	
Repairs, ordinary	4,678 86	
	<hr/>	\$104,244 33
Total		\$653,189 41

## TREASURER'S REPORT.

*To the Trustees of the Massachusetts Hospital School.*

I respectfully submit the following report of the finances of this institution for the fiscal year ending Nov. 30, 1923:—

CASH ACCOUNT.	
Balance Dec. 1, 1922	\$4,410 89

Receipts.	
<i>Income.</i>	
Board of inmates	\$53,212 64
Personal services:	
Reimbursement from Board of Retirement	62 02
Sales	334 33
Miscellaneous	224 89
	<hr/>
	53,833 88

<i>Receipts from Treasury of Commonwealth.</i>	
Maintenance appropriations	170,556 99
Special appropriations	26,267 45
Income account	237 70
	<hr/>
Total	\$255,337 03

Payments.	
To treasury of Commonwealth	\$53,940 08
Maintenance appropriations	172,822 91
Special appropriations	26,009 06
Income account	237 70
Balance Nov. 30, 1923:	
In bank	\$2,195 52
In office	131 76
	<hr/>
	2,327 28
	<hr/>
Total	\$255,337 03

MAINTENANCE.	
Balance from previous year, brought forward	\$150 62
Appropriation, current year	172,035 00
	<hr/>
Total	\$172,185 62
Expenses (as analyzed below)	169,373 30
	<hr/>
Balance reverting to treasury of Commonwealth	\$2,812 32

Analysis of Expenses.	
Personal Services	\$84,928 73
Religious Instruction	1,550 00
Travel, Transportation and Office Expenses	1,557 36
Food	25,466 75
Clothing and Materials	3,381 12
Furnishings and Household Supplies	5,977 72
Medical and General Care	5,433 26
Heat, Light and Power	20,027 72
Farm	10,498 78
Garage, Stable and grounds	4,483 86
Repairs, ordinary	4,079 70
Repairs and Renewals	1,988 30
	<hr/>
Total expenses for maintenance	\$169,373 30

SPECIAL APPROPRIATIONS.	
Balance Dec. 1, 1922	\$6,575 44
Appropriations for current year	50,359 88
	<hr/>
Total	\$56,935 32
Expended during the year (see statement below)	25,620 23
	<hr/>
Balance Nov. 30, 1923, carried to next year	\$31,315 09

Object	Act or Resolve	Whole Amount	Expended during Fiscal Year	Total expended to Date	Balance at End of Year
Purchase of land . . .	Chapter 225, Acts 1920	\$15,000 00	—	\$13,042 25	\$1,957 75
Buildings for State Minor Wards . . .	{ Chapter 629, Acts 1920 Chapter 502, Acts 1921 Chapter 129, Acts 1922 }	200,000 00	\$1,963 92	197,346 23	2,653 77
Power and Laundry Buildings . . .	Chapter 494, Acts 1923	42,845 00	17,065 65	17,065 65	25,779 35
Changing old Infirmary into Employees' Home . . .	Chapter 494, Acts 1923	7,000 00	6,075 78	6,075 78	924 22
Legal Services . . .	Chapter 494, Acts 1923	514 88	514 88	514 88	—
		\$265,359 88	\$25,620 23	\$234,044 79	\$31,315 09

RESOURCES AND LIABILITIES.

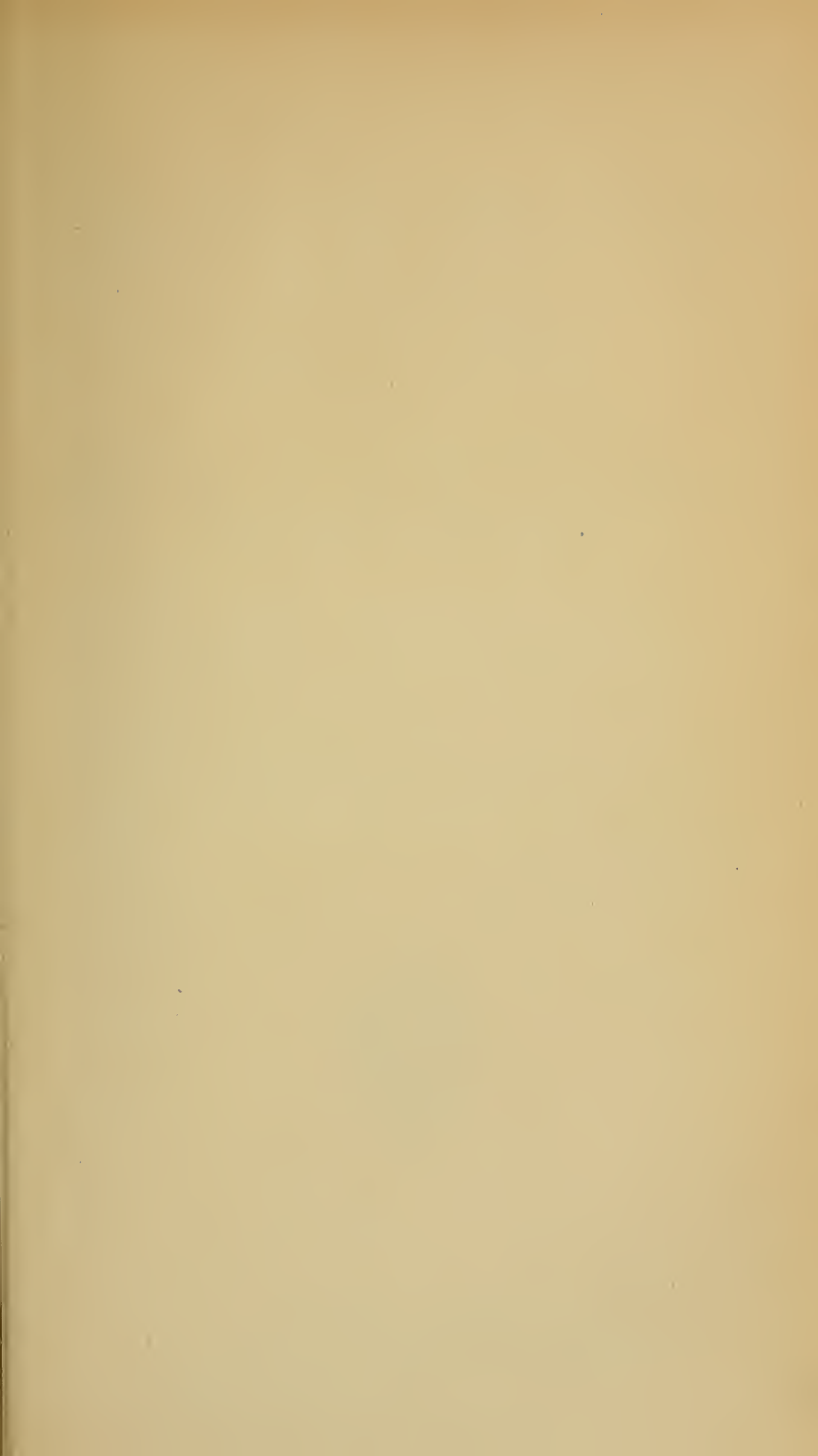
Resources.					
Cash on hand . . . . .				\$2,327 28	
November cash vouchers (paid from advance money): . . . . .					
Account of maintenance (October) . . . . .			\$6,417 67		
Account of maintenance (November) . . . . .			6,250 64		
Account of special appropriations . . . . .			4 41		
				12,672 72	
Due from treasury of Commonwealth from available appropriation account . . . . .				October &	\$15,000 00
November, 1923, schedule . . . . .					6,200 28
Special Schedule . . . . .					73 20
					\$21,273 48
Liabilities.					
Outstanding schedules of current year:					
Schedule of October and November bills . . . . .					\$21,200 28
Special Schedule . . . . .					73 20
					\$21,273 48

PER CAPITA.

During the year the average number of inmates has been 298.25.  
Total cost for maintenance, \$169,373.30.  
Equal to a weekly per capita cost of \$10.92.  
Receipt from sales, \$334.33.  
Equal to a weekly per capita of \$.0215.  
All other institution receipts, \$53,499.55.  
Equal to a weekly per capita of \$3.4495.  
Net weekly per capita, \$7.4498.

Respectfully submitted,  
JOHN E. FISH, *Treasurer.*

Examined and found correct as compared with the records in the office of the Comptroller.  
JAMES C. McCORMICK, *Comptroller.*





The Commonwealth of Massachusetts

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ANNUAL REPORT

OF THE

TRUSTEES OF THE MASSACHUSETTS  
HOSPITAL SCHOOL

FOR THE

YEAR ENDING NOVEMBER 30, 1924

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DEPARTMENT OF PUBLIC WELFARE

LIBRARY OF THE  
Massachusetts Agricultural College  
AMHERST, MASS.



PUBLICATION OF THIS DOCUMENT

APPROVED BY THE

COMMISSION ON ADMINISTRATION AND FINANCE



# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL

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### TRUSTEES

EDWARD H. BRADFORD, M.D., BOSTON  
WILLIAM F. FITZGERALD, BROOKLINE  
WALTER C. BAYLIES, TAUNTON  
ANDREW MARSHALL, BOSTON  
GEORGE H. ELLIS, NEWTON

### RESIDENT OFFICERS

JOHN E. FISH, M.D., *Superintendent and Treasurer*  
ORA G. DANIELS, M.D., *Assistant Physician*  
LYSANDER S. KEMP, M.D., *Assistant Physician*  
PENELOPE SHERWOOD, M.D., *Assistant Physician*  
MABEL J. GODDARD, *Chief Clerk*  
GEORGE H. LOMBARD, *Steward*  
MARGARET MACDONALD, R.N., *Head Nurse*  
ALEXSANDRAENA RUDLAND, *Supervising Nurse*  
MILDRED L. SUKEFORTH, *Supervising Nurse*  
ELIZABETH C. SHAW, R.N., *Supervising Nurse*  
CORA E. RICHARDSON, *Head Teacher*  
LILLIAN S. SWIMM, *Head Matron*  
WILLIAM H. COFFIN, *Chief Engineer*  
JESS BLACK, *Farmer*

## The Commonwealth of Massachusetts

### REPORT OF THE TRUSTEES

*To His Excellency the Governor and the Honorable Council:*

The Trustees of the Massachusetts Hospital School beg leave to present the following report:—

The activity of the School has continued in the past year to show the same satisfactory results mentioned in previous reports.

The organization of an Alumni Association which has been formed by a number of graduates of the institution, promises to be of importance not only as giving evidence of the practical results obtained from the institution, but also as an opportunity to stimulate the care of crippled children throughout the Commonwealth. Two hundred and twenty-nine have been given a school diploma and have formed themselves into an alumni association and it is proposed with the increasing numbers of our graduates to establish units in the different parts of the Commonwealth. With organized and stated meetings these groups can be used as agencies for the supervision of and aid to graduates of the school seeking employment. It would be desirable in the future to have some connection between the School to co-ordinate the organizations themselves and for this reason the Trustees would recommend the employment of a field worker. Such a representative of the School would also be of use to the community in obtaining more accurate information than has as yet been possible of the exact number of crippled children needing treatment in the Commonwealth. The Trustees have found it important to obtain accurate statistics on this subject. Several other states have endeavored to obtain such statistics and the superintendent has received many inquiries as to the number of crippled children in this Commonwealth. The inquiries made in other states have been misleading as a distinction has not been sharply drawn between disabled children suffering from mental disability

and those with normal mental intelligence, who can be classified as capable of instruction and the educational training for which the Massachusetts Hospital School is especially intended. The Commonwealth of Massachusetts has been a leader in the work of training crippled children and the results shown by the record of graduates is a justifiable source of gratification not only to the Trustees, but to the citizens of the Commonwealth. The educational results and the development of self-reliance and moral character shown by the records of the graduates from this institution have been even more gratifying than was anticipated by the more sanguine advocates of the establishment of the School. In the initial steps of the establishment of the institution the uncertainty of the success of the educational training of crippled children was so great that the Trustees did not feel justified in providing for a large school equipment and the work accomplished has been conducted under the most meager teaching facilities, less than those which exist in any of the schools in any part of the Commonwealth. The Trustees feel justified in asking for an appropriation of \$65,000 for a schoolhouse adequately fitted for the needs of the institution and for the best training of the pupils as well as for a proper consideration of their physical disability, especially in regard to fresh air needed for tuberculous and delicate children. The Trustees wish particularly to emphasize the importance of this request and ask for its careful consideration.

The Board of Trustees have met with a loss by resignation of Honorable Leonard W. Ross, whose business activities elsewhere required his resignation from the Board and discontinuance of the work with which he has been so long connected. The Board is greatly indebted to him for his activities and devotion in the early organization of the institution and in its continuation.

The superintendent's and treasurer's reports are herewith annexed and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD  
WILLIAM F. FITZGERALD  
WALTER C. BAYLIES

ANDREW MARSHALL  
GEORGE H. ELLIS

## SUPERINTENDENT'S REPORT TO THE TRUSTEES OF THE MASSACHUSETTS HOSPITAL SCHOOL

The seventeenth annual report of the Superintendent is herewith respectfully submitted.

Under the provisions of Chapter 121 of the General Laws, the Massachusetts Hospital School shall be maintained for the education and care of the crippled and deformed children of the Commonwealth, subject to such rules and regulations as the Trustees may prescribe, and for such sick minor wards who are not insane, epileptic, feeble-minded or otherwise unfit as may be assigned for hospital care and treatment by the Department of Public Welfare. While the law also provides that land, buildings and products of the farm may be used interchangeably for both departments of the institution and that officers, employees and attendants shall, as required by the Trustees, render service to either or both departments, it has been found desirable for administrative reasons to keep the crippled and deformed children in the school division as widely separated as possible from the sick patients in the hospital group. In order that there may be no unnecessary duplication in the clerical, medical and nursing service, as well as in other departments, and the cost of maintenance shared equally by all, irrespective of the reasons for admission, there has been no division in the cost of maintenance of the children received. For the same reason statistics have been compiled without reference to any separation of numbers, except to differentiate the crippled children in need of special educational opportunities from those entered for hospital care only.

There were in the institution on November 30, 1923, 275 children, 238 in the school division and 37 sick minor wards. There have been admitted 473 children, 68 to the school and 405 for hospital care only. The whole number under treatment during the year was 748. The maximum number at any one time was 336, the minimum 191, and the daily average for the year 295.04. The discharges

numbered 456, 389 from hospital care and 67 from the school, leaving in the institution at the end of the year 292, 239 school cases and 53 sick minor wards.

*Age.* The average admission age to the school was 9 years, 3 months and 5 days, and to the hospital 9 years, 6 months and 29 days, while the average age on discharge was 13 years, 1 month and 7 days for the school and 9 years, 8 months and 25 days for the hospital cases. For the past two years there has been a gradual increase in the number of girls, so that the boys now constitute a small minority in both departments, a circumstance for which no satisfactory explanation has been advanced.

*Nativity.* The nativity statistics show that of the 405 children received primarily as hospital cases, 337, or 83 per cent, were born in Massachusetts; 49, or 12 per cent, were born in other parts of the United States; while only 6, or 1 + per cent, were foreign born. One hundred and eight fathers and 161 mothers were American born against 139 fathers and 154 mothers who were foreign born. The birthplace of 13 children, 158 fathers and 90 mothers was unknown. Of those entering the school, 49, or 77 per cent, were born in Massachusetts; 5, or 7 per cent, in other parts of the United States; 8, or 12 + per cent, were foreign born, while 2, or 3 per cent, were unknown. Twenty-six fathers and 21 mothers were American born against 34 fathers and 40 mothers who were of foreign birth. The birthplace of 3 fathers and 2 mothers of the children admitted to the school department were unknown.

*Income.* That portion of chapter 121 of the General Laws pertaining to the rate of board was amended under Chapter 344 of the Acts of 1924 by increasing the board from \$4 to \$6 per week, which will materially increase our income for another year. The decision of the Trustees to make no deduction in charging for the board of patients who are temporarily absent for a period less than one week instead of for each day's absence as heretofore will be another source of income.

The income from all sources for the fiscal year ending November 30, 1924, was \$52,463.84.

Maintenance expenditures for the year amounted to \$161,280.99 which when divided by 295.04, the daily average number of patients, gives a weekly per capita cost of \$10.51.

By deducting the receipts from the total expenditures and again dividing by the daily average, the net per capita cost to the State was found to be \$7.09.

The general health of the entire school population, including officials and employees, has been remarkably good throughout the year. Diseases reportable under the law, exclusive of the deformities following tuberculous bone and joint lesions, were limited to four independent cases of diphtheria which appeared at various times throughout the year, one case of mumps, one case of chicken-pox and one case of measles.

The usual average run of cases have been admitted to both departments, as shown by the diagnoses given by certifying physicians in the following table of the

#### DIAGNOSIS ON ADMISSION

	<i>Hospital Department</i>	Boys	Girls
Abscess outer side of femur . . . . .		—	1
Acute bronchitis . . . . .		1	—
Appendicitis . . . . .		1	2
Arthritis (acute) . . . . .		—	2
Asthma . . . . .		1	—
Birth palsy . . . . .		1	—
Blepharitis . . . . .		—	2
Cervical adenitis . . . . .		2	3
Chalazion . . . . .		—	1
Chorea . . . . .		—	2
Chronic appendicitis . . . . .		1	5
Chronic heart disease . . . . .		1	—
Chronic otitis media . . . . .		1	2
Congenital dislocation of hips . . . . .		—	1
Congenital heart disease . . . . .		1	—



Boys Girls

Conjunctivitis . . . . .	1	—
Contracture of finger . . . . .	1	—
Contracture of fingers . . . . .	—	1
Contusion of muscles about hip and lower back . . . . .	1	—
Cystitis . . . . .	—	2
Deviated septum . . . . .	5	1
Eczema . . . . .	1	1
Empyema of antrum of Highmore; enuresis; scabies . . . . .	1	—
Enlarged tonsils and adenoids . . . . .	101	73
Enlarged tonsils and adenoids; adenitis of neck and axilla . . . . .	—	1
Enlarged tonsils and adenoids; cervical adenitis . . . . .	3	2
Enlarged tonsils and adenoids; chronic appendicitis . . . . .	1	—
Enlarged tonsils and adenoids; defective vision; ivy poison . . . . .	—	1
Enlarged tonsils and adenoids; deviated septum . . . . .	1	—
Enlarged tonsils and adenoids; eczema . . . . .	—	1
Enlarged tonsils and adenoids; enuresis . . . . .	1	3
Enlarged tonsils and adenoids; impetigo . . . . .	3	—
Enlarged tonsils and adenoids; impetigo; blepharitis . . . . .	1	—
Enlarged tonsils and adenoids; osteomyelitis of femur . . . . .	1	—
Enlarged tonsils and adenoids; otitis media . . . . .	1	2
Enlarged tonsils and adenoids; phimosis . . . . .	5	—
Enlarged tonsils and adenoids; prolapse of rectum . . . . .	1	—
Enlarged tonsils and adenoids; rickets . . . . .	—	2
Enlarged tonsils and adenoids; scabies . . . . .	3	2
Enlarged tonsils and adenoids; seborrhea . . . . .	—	1
Enlarged tonsils and adenoids; stomach worms . . . . .	—	1
Enlarged tonsils and adenoids; syphilis . . . . .	1	1
Enlarged tonsils and adenoids; umbilical hernia . . . . .	1	1
Enlarged tonsils and adenoids; undescended testicles . . . . .	2	—
Enuresis . . . . .	5	2
Extensive second degree burns . . . . .	—	1
Flat feet . . . . .	—	1
Fractured clavicle . . . . .	1	—
Fracture of olecranon . . . . .	1	—
Fracture of radius and ulna . . . . .	1	—
Fractured tibia . . . . .	1	—
Furuncle . . . . .	—	1
Gonorrhea . . . . .	—	7
Hammer toe . . . . .	—	1
Hypertrophied turbinates . . . . .	1	—
Hyperthyroidism . . . . .	1	—
Impetigo . . . . .	9	4
Impetigo; enteritis; rickets . . . . .	1	—
Impetigo; infection of left thumb; warts on hands . . . . .	1	—
Infected arm . . . . .	—	2
Infected toe . . . . .	1	—
Infection of frontal sinuses . . . . .	1	—
Inguinal hernia . . . . .	3	—
Injury to right ankle . . . . .	—	1
Injury to right knee . . . . .	—	1
Masturbation . . . . .	1	—
Observation for gastric ulcer . . . . .	1	—
Observation for persistent vomiting . . . . .	—	1
Osteomyelitis . . . . .	1	1
Phimosis . . . . .	9	—
Prolapse of rectum . . . . .	1	—
Pyelonephritis and hysteria . . . . .	—	1
Ringworm . . . . .	1	—
Rickets . . . . .	3	1
Rheumatism . . . . .	1	1

	Boys	Girls
Rheumatic heart . . . . .	1	1
Round shoulders . . . . .	1	—
Salpingitis . . . . .	—	1
Scabies . . . . .	14	15
Scabies and impetigo . . . . .	3	2
Scoliosis . . . . .	—	1
Seborrhea . . . . .	—	1
Severed tendo achillis . . . . .	1	—
Shingles . . . . .	1	—
Slipping patellae . . . . .	—	1
Spastic paralysis . . . . .	—	1
Stricture of esophagus . . . . .	2	—
Sunburn . . . . .	—	1
Syphilis, congenital . . . . .	6	3
Thickening of sterno-mastoid muscle . . . . .	—	1
Tired heart with chronic vomiting . . . . .	—	1
Tuberculous osteitis and blepharitis . . . . .	—	1
Uterine and nasal hemorrhage and anemia . . . . .	—	1
Undiagnosed . . . . .	1	1
Vaginitis . . . . .	—	4
	<hr/> 221	<hr/> 184

*School Department*

Amputation of leg . . . . .	2	1
Arthritis . . . . .	—	1
Bow legs . . . . .	1	—
Congenital deformity of hands . . . . .	1	—
Congenital deformity of lower leg . . . . .	—	1
Congenital dislocation of hips . . . . .	—	1
Fracture of femur . . . . .	1	1
Infantile paralysis . . . . .	6	4
Malformation of tibial epiphyses . . . . .	—	1
Osteomyelitis . . . . .	1	3
Progressive muscular dystrophy . . . . .	3	—
Rachitic deformity . . . . .	2	1
Spastic paralysis . . . . .	3	3
Tuberculous disease of ankle . . . . .	1	—
Tuberculous disease of hip . . . . .	6	3
Tuberculous disease of knee . . . . .	1	2
Tuberculous disease of pelvis . . . . .	1	—
Tuberculous disease of rami ischii . . . . .	1	—
Tuberculous disease of spine . . . . .	4	7
	<hr/> 34	<hr/> 29

There were altogether 5 deaths during the year, as follows: Tuberculous meningitis and tuberculous disease of hip with abscesses and amyloid degeneration of the liver, one case; stenosis of bowel, one case; acute cardiac dilatation and empyema and amyloid degeneration of liver and kidneys, one case; septic poisoning and acute cardiac dilatation, one case; tuberculous meningitis and tuberculous disease of spine and ankle, one case.

Of the 66 children who were discharged from the school department, 19 had completed the prescribed course of study in the grades and had been awarded the school diploma. Including those who were graduated, 28 were discharged to attend high schools or were regarded as no longer in need of special care and training and left to continue their education elsewhere; 10 were taken home on visits and failed to return; 4 were physically unpromising; 7 were found to be mentally defective; 4 were removed against advice; 2 were discharged to leave the State; 8 for whom further education was impossible were capable of self-support and 3 children died.

*Field Worker.* An effort has been made in various ways to follow up the discharged cases. Many come back for advice or to report progress, others are reached by correspondence and through the local authorities and private charitable organizations. Such methods, fairly satisfactory at first when there were comparatively few cases to be considered, are no longer desirable. Parents who remove their children against advice usually soon realize their mistake, but are often too proud to take the initiative in the matter of readmission. Others who take their children home on visits are encouraged by the improvement observed and keep children at home to give them a trial in a public school before they are strong enough to compete with normal children. There are some parents who prolong the visits beyond the appointed time for return and are then ashamed to offer what they know to be a weak excuse. Real or imaginary grievances which some do not wish to make a basis for discussion or complaint are doubtless the cause of failure to return in a few cases. While any attempt to promote the welfare of a crippled child without the full co-operation of his parents is very apt to be disappointing, the difficulties above mentioned could be readily overcome in the vast majority of cases if the School had a competent representative or field worker whose time could be divided between the activities of the School, with which she should be intimately familiar, and the interests of the homes, with which the school should be in closer contact. Another and perhaps a more important function in which the services of a field worker would be of value is to be found among the permanently handicapped alumni, whose progress should be closely followed as a guide to the further advancement or modification of the policy of the School.

## SCHOOL REPORT

### *To the Superintendent of the Massachusetts Hospital School:*

Our school year opened with a total enrollment of 232 pupils and with no change in the personnel of our teaching staff. The children taken as a whole seem unusually intelligent and ambitious, well worth every effort that can be expended in their behalf.

Our course of study is planned to meet the demands of the public schools to which those who are temporarily disabled are likely to return at any time; also to prepare for high school which receives an increasing number of our graduates each year.

*School.* Our graduating class is required to complete the Stone-Millis Advanced Arithmetic; Atwood's New Advanced Geography; Keller and Bishop's Commercial and Industrial Geography; Montgomery's American History; The Aldine Language Book (advanced); an elementary course in civil government; and the Boston word list. They also take an elementary course in double-entry book-keeping and begin the study of algebra. Our graduates go directly from here into high school and have no difficulty in competing with the products of the public schools.

In addition to the regular grade work, our pupils have regular instruction in needlework, domestic science, music and manual training, besides ample opportunities for practical experience in farm work, printing, cobbling, tailoring and other useful occupations.

As soon as possible after a child is admitted, we try to discover what line of work is best suited to his abilities and inclinations, then give him special training along that line. One boy gravitates naturally to the farm, another to the printing shop, another to the bakery; one girl finds within herself an aptitude for dress-making, another for cooking, another for designing; and so the foundations of many a life work are laid.

Interest in reading has been greatly stimulated this year by offering to the pupils certificates, issued by the Massachusetts Department of Education. A small certificate, bearing the State seal, is given for reading and reporting on five books, and a larger one, called an Honor Certificate, for twenty books covered in like manner. Several certificates have already been earned and we expect to award many more before the end of the year.

Our pupils have advantages for recreation that many a child in his own home might envy. Bordering the school grounds is a beautiful lake that affords our



young people many hours of pure delight. In the summer, under the supervision of a teacher, they learn to swim, and dive and row. In the winter they learn to skate. Some of the feats accomplished by these lads make the onlooker gasp with amazement.

During the spring and fall the ball field is the chief attraction. Many a husky team of public school boys has gone home badly defeated by a team of cripples, whose pitcher, obliged to sit on the ground because of infantile paralysis, nevertheless, threw balls with a speed and accuracy that few normal boys of the same age could equal.

Every holiday means a grand, good time at the school. On the fourth of July we had a big picnic, followed by athletic sports and moving pictures. Hallowe'en brought a series of gay parties, each teacher providing the fun for her own classes. The decorations for these and all school parties are planned by the manual training teacher and made by the children under her direction; so we are always sure to have something unique and artistic to grace these festive occasions.

The week before Christmas, teachers and children worked merrily together making wreaths and garlands to decorate the buildings; then a Christmas tree was set in every cottage and dormitory, and gifts poured in from every direction till each building resembled a veritable toyland.

In addition to our holiday festivities, many happy hours have been spent in the assembly hall, where the motion picture machine and radio loud speaker have combined to bring the world to our boys and girls. Here, too, have been held several entertainments given by various organizations for the benefit of our children, two of which have been given by our own Alumni Association.

The children themselves have provided a number of entertainments. One play has been given by the graduating class, and one by the Camp Fire Girls; three fine concerts by the singing classes and piano pupils have been greatly enjoyed by all music lovers; and a number of parties managed by the older pupils have given pleasure to old and young.

Thanks to the kindness of the Rotary Club of Quincy, the whole school had a wonderful trip to Nantasket Beach last June. About seventy-five automobiles were provided for the excursion, a delicious dinner was served in the pavilion, and the day was filled to overflowing with never-to-be-forgotten delights.

Another "red-letter" day was the gift of our friend, Mr. Sydeman, who annually invites the school to a moving picture entertainment at the theatre in Canton. Although we have moving pictures at the School, the children always hail this event with joy. The trip down and back, the candy and toys which Mr. Sydeman so generously provides, all combine to make the occasion a memorable one.

After fifteen years of labor among these interesting young people, we are beginning to see results which fill us with exceeding pride and joy. We now have a vigorous Alumni Association of over 200 members, a large percentage of whom are prosperous, self-supporting citizens. In this group are high school and college students, keen young business men and women and proud heads of families. When they met at the School last June for their annual reunion, they reorganized the association and adopted a constitution. Now they are busy with plans for future usefulness, chief among which is the establishment of a vocational bureau to assist members of the association in finding suitable employment.

Having ever before us such substantial proof of the value of our work, we enter upon the new year with high hopes, and a prayer that we may not fail even the least of these, His "little ones," in their hour of need.

Respectfully submitted,

CORA E. RICHARDSON, *Head Teacher.*

With the greatly improved hospital facilities at the Bradford Infirmary now well established, attention may well be directed to a much needed expansion and development of the school equipment which has not kept pace with the growth of the institution, and which can no longer be regarded as adequate to the steadily increasing demand. It should be borne in mind that the successes of the most promising graduates of the school are directly traceable to the small classes and intensified individual training, which the teachers were able to give by the frequent

rotation of classes in short sessions in the early history of the school, when the four original schoolrooms were adequate for the number of pupils then enrolled. With the knowledge gained by experience that decided physical improvement in most of the crippling deformities of childhood could be expected under appropriate and long continued hospital care, it was thought most desirable to give precedence to the demand for better hospital facilities, and as expansion could not be made in both departments at the same time, the school work has necessarily suffered until the demand for more school room and better classroom equipment is now most urgent. Great credit is due the members of the teaching staff, and the enthusiasm of their pupils for an education is most gratifying, but neither can be expected to continue with an average enrollment of 220 pupils in four schoolrooms originally designed for a much smaller number. In past years the graduates of the Hospital School have shown themselves capable of entering any high school, and yet this record has been established with both teachers and pupils laboring against serious drawbacks and difficulties which in the past could scarcely have been avoided, and yet which should not be allowed to continue. If a schoolroom is crowded and its atmosphere not conducive to study, if the lighting facilities are poor and the ventilating not good, the pupils cannot do justice to the teacher, nor she, in turn, do justice to them. She may be a most efficient and capable instructor and her class most willing and ambitious, but results will not come up to possibilities until such conditions as have been enumerated have been remedied. When these improvements are made our school department will not only be able to continue the creditable results heretofore accomplished, but will also be able to hold its own with other educational institutions of the State, and to succeed in its endeavor to give crippled and deformed children, deprived of an opportunity for education elsewhere, the equivalent, at least, of the instruction given in any public grammar school. The Massachusetts Hospital School Alumni have clearly shown that the education of the crippled child is without doubt of great pedagogic and social significance and for this reason we believe that this feature of the Hospital School should by no means be neglected.

Your attention is again respectfully called to the urgency for more school room and better school equipment for which I would recommend that you request an appropriation of \$65,000.

The advantages of fresh air and sunshine, which we have always regarded as indispensable to the welfare of our children, and which have heretofore been provided by unrestricted life in the open and the direct ventilation of our monitor roof buildings has been supplemented by the installation of an ultra-violet lamp for use especially during the winter months and on cloudy days. After several months of study and with the aid of the Department of Biophysics of Harvard University, members of the resident staff are pursuing a piece of research in ultra-violet therapy for children suffering from rickets and other diseases. That the course of metabolism in both plants and animals is very profoundly influenced by the radiant energy which they receive from the sun, particularly that part which is invisible to our own eyes, has been established by a very large number of investigators. Physiological effects of the invisible heating rays of the sun have, of course, been recognized since the dawn of history. Physiological effects of the invisible ultra-violet rays have been universally recognized. It appears to be impossible for the human organism to develop if it is deprived of ultra-violet radiation, unless this radiation is made up by some vitamins which certain foods seem to contain. In climates where it is impracticable to have the children out-of-doors in sunlight, the deficiency in ultra-violet light can now apparently be met by artificial sources. Most gratifying results have been observed in the cases thus far treated by the quartz lamp recently installed.

*Surgical Operations.* Two hundred and sixty-two surgical operations were performed during the year as follows: Appendectomy, 1; astragalectomy, 2; circumcision, 6; closed reduction of congenital hip, 1; correction of club foot, 1; curettage of old sinuses with drainage, 2; excision of lipoma, 1; hammer toe correction, 1; herniotomy, 1; Hoke (sub-astragaloid arthrodesis) 5; incision and drainage of abscess, 3; osteotomy, 2; reamputation, 1; removal of tonsils and adenoids, 225; paracentesis auriculi, 1; sequestrectomy, 3; sub-mucous resection, 1; tendon lengthening, 2; tendon transplant, 2; transposition of ulnar nerve, 1.



Practically all the children's teeth have been regularly examined by the dentist whose report shows 903 appointments for the following work: 324 amalgam fillings; 262 cement fillings; 50 zinc-oxide fillings; 21 gutta percha fillings; 33 synthetic fillings; 259 extractions; 440 prophylactic treatments and 8 root canal cases.

The carpenters and painters have found difficulty in keeping pace with the demands for minor repairs and improvements, and it is anticipated that some temporary non-resident labor will be required to complete necessary outside painting and shingling another summer.

*New Paint Shop.* With creditable interest and the pride which a good mechanic takes in his work, the carpenter has constructed a paint shop of much more substantial material than was at first thought possible within the sum of \$600 made available for the purpose. By careful planning and the utilization of some pine lumber cut from the grounds of the institution, we were able to make all outside finish and window frames and to purchase the other necessary materials for a brick building fourteen feet wide by thirty feet long, located just north of the engine room and so constructed as to be in general keeping with that building. The eight inch brick walls of the new shop are laid upon a cement wall of the same thickness, which extends below the grade line to a suitable depth for a firm foundation. The hip roof is of wood construction and covered with the best grade of cedar shingles. The floor is of concrete, three inches thick, laid over a well packed bed of gravel and troweled to a smooth, even surface. All labor, except that of a mason and tender to lay the brick, was done by resident employees.

A contract was placed for a new frost casing for the riser pipe to the high pressure water tank and the work completed in November.

The old laundry over the engine room has been thoroughly renovated and fitted for use as a cobbling and orthopedic apparatus shop.

*Improvements.* Numerous changes pertaining to the heat, light and power plant have made heavy demands upon the Chief Engineer, whose department as at present organized consists of four first-class firemen to operate in successive shifts the boilers, pumps and engines, and a mechanic helper for repairs, and the manufacture of orthopedic apparatus. All of the old laundry machinery has been taken down, repaired and set up in the new laundry building. The mangle, which was considered by the manufacturers to be of little value, was successfully repaired and is efficiently serving its purpose. The installation of a wrought iron smoke flue to connect the new 300-horse-power water tube boiler with the old chimney has been completed, and although the work was done by contract it involved many interruptions to routine work. The department was also kept in a state of unavoidable disorder by the installation of a new fire pump (Chapter 126 of the Acts of 1924). The pump is of the single stage centrifugal type and at 1,750 revolutions has a capacity of 1,000 gallons per minute. It is driven by a 100-horse-power single-stage steam turbine and is connected with the town water supply by approximately 700 feet of 6-inch cast iron water pipe. This pump will deliver four good streams at 100 pounds pressure, providing sufficient water is supplied by the town.

A boiler feed water meter has been installed upon the recommendation of the Commission of Administration and Finance, and much time has been devoted to the experiment of adjusting the meter for accurate readings. With our present variable steam load, the pulsations of the feed water reciprocating pumps originally installed are troublesome to overcome, and it will doubtless be found necessary to install centrifugal pumps if reliable meter records are to be obtained. It has not been found necessary to put into operation the 300 horse-power boiler which was installed last year to supplement the three 60-inch boilers now in use. However, it gives a feeling of security at the beginning of winter to have in reserve more than double our maximum requirements. The time is near at hand when engine and generator capacity must be increased, and careful consideration given to the advisability of continuing the power plant within the limits of a first-class fireman's license, an arrangement which has heretofore seemed desirable in the interests of economy.

*Official Family.* To meet the demands of a much more elaborate system of accounting than has heretofore been thought necessary, Miss Ruth F. Avery, a graduate of the Connecticut College for Women, was advanced from her position of matron of the Domestic Science Cottage to a place in the office of the Chief Clerk. Miss E. Bernice Carter, R.N., supervisory nurse at the Bradford

Infirmiry, resigned in June to get married and the vacancy thus caused was filled in September by the appointment of Miss Elizabeth C. Shaw, R. N.

Dr. C. Glenn Barber resigned his appointment as assistant physician in December to enter private practice, and he was succeeded in August by Dr. Penelope Sherwood, a graduate of Vassar College in the class of 1919 and the Johns Hopkins Medical School in the class of 1923.

Mr. George H. Lombard, familiar by long experience with the merchandise of a general retail store and the wholesale grocery business, as well as an early practical knowledge of farming, was appointed steward on January 15, 1924.

Miss Harriet R. Burwell, after many years of creditable service as bookkeeper and accountant, retired in April and was succeeded by Miss Louise A. Snow.

In recognition of meritorious service, reference should also be made to the retirement of Mr. and Mrs. Malcolm Morrison, who served the institution faithfully and well for a continuous period of fifteen years. The party given in their honor was largely attended by former pupils of the school, and Mr. and Mrs. Morrison were of great assistance in the selection of their successors, whom they remained to introduce into the service at the Boys' Cottage.

From January 1st to July 1st Dr. Joseph P. Derby served as graduate assistant from the Harvard Post-Graduate Medical School, and he was succeeded for the following four months by Dr. Lemuel D. Smith, formerly of the Massachusetts General and the Boston Children's Hospitals. On October 1st Dr. T. R. Haigh was assigned to special duty as part time post-graduate assistant in orthopedic surgery.

*Farm.* The dairy continues to be a valuable source of profit to the institution, 100,841 quarts of milk having been produced at a cost, as determined by the prescribed system of accounting, of  $5\frac{1}{2}$  cents. Other products of the farm were as follows: Beans (shell), 346 pounds; beans (string), 536 pounds; beets, 1,915 pounds; cabbage, 395 pounds; carrots, 7,561 pounds; cauliflower, 25 pounds; celery, 355 pounds; corn (green), 2,443 pounds; cucumbers, 1,325 pounds; lettuce, 315 pounds; onions, 1,593 pounds; parsley, 4 pounds; parsnips, 395 pounds; peas, 672 pounds; potatoes, 11,822 pounds; pumpkins, 250 pounds; radishes, 81 pounds; rhubarb, 604 pounds; spinach, 400 pounds; squash, 1,735 pounds; Swiss chard, 476 pounds; tomatoes, 6,543 pounds; turnips, 2,375 pounds; beef, 2,894 pounds; fowl, 3,590 pounds; pork, 4,646 pounds; veal, 118 pounds; eggs, 3,623 dozen; barley, 8,240 pounds; ensilage, 179 tons; mangel-wurzel, 11,640 pounds; millet, 15,375 pounds; peas and corn, 5,120 pounds; rye,  $4\frac{1}{2}$  tons; grass, 20 tons; oats, 10 tons. Two hundred and fifty tons of ice were harvested.

All of the 1,776 gross tons of coal burned during the year were handled by the small farm crew in addition to other important institution work which the farmers are called upon to perform.

*Acknowledgment.* The institution is indebted to an increasing number of good friends who have given entertainments, automobile rides and hundreds of gifts at Christmas time. To the Quincy Rotarians for a day at Nantasket Beach, to the Norwood Lodge of Elks for their annual party, to the Canton Daughters of Isabella for a concert and minstrel show, to the Ladies of the Boston Philanthropic League for a musical concert, to Mr. A. Sydeman for his theatre party, to the Canton Knights of Columbus for complimentary tickets to their annual entertainment, to the Canton & Blue Hill Bus Line, many citizens of the town for free transportation of our children upon several occasions, and to many others we owe a large debt of thanks. The School is under renewed obligations to Mr. and Mrs. Augustus Hemenway for personally conducted automobile trips to Franklin Park and for the use of their beautiful estate for a series of afternoon picnics for our girls. For the opportunity to see the whippet races upon the estate of Mr. and Mrs. Paul A. Draper and for consideration shown at the Field Day of the American Legion, we are also grateful.

In behalf of my associates in the service of the institution I wish to express appreciation of the generous and helpful assistance of a former member of your Board, Honorable Leonard W. Ross. All who knew him miss his genial presence and greatly regret the necessity for his withdrawal.

In closing, may I also express official and personal obligation to the Trustees.

Respectfully submitted,

JOHN E. FISH, *Superintendent and Treasurer.*

## TERMS OF ADMISSION

Crippled and deformed children of the Commonwealth, between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about two miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Automobile bus connects with two trains at Canton Junction station on Saturdays and Sundays.

Postoffice address: Canton, Mass.

Applications for admission should be made to the superintendent.

*Nativity and Parentage of Children Admitted*

Birthplace	Patient	Father	Mother
Massachusetts . . . . .	386	73	127
Other New England States . . . . .	32	37	35
Other States . . . . .	22	24	20
Total Native . . . . .	440	134	182
Other countries:			
Austria . . . . .	—	4	5
Albania . . . . .	—	—	1
Armenia . . . . .	—	1	1
Azores . . . . .	—	2	2
Barbadoes . . . . .	—	3	2
British West Indies . . . . .	—	2	2
Canada . . . . .	5	42	43
Egypt . . . . .	—	1	1
England . . . . .	—	4	8
Finland . . . . .	—	6	7
Greece . . . . .	1	7	5
Holland . . . . .	—	1	—
Ireland . . . . .	—	6	26
Italy . . . . .	4	38	37
Lithuania . . . . .	—	8	9
Madeira Islands . . . . .	1	1	1
Newfoundland . . . . .	—	3	3
Portugal . . . . .	—	3	3
Russia . . . . .	1	12	13
Scotland . . . . .	—	1	1
Sicily . . . . .	1	—	—
Syria . . . . .	1	10	6
Sweden . . . . .	—	1	1
Poland . . . . .	—	17	17
Total Foreign . . . . .	14	173	194
Unknown . . . . .	14	161	92
	468	468	468



## TREASURER'S REPORT

To the Trustees of the Massachusetts Hospital School:

I respectfully submit the following report of the finances of this institution for the fiscal year ending November 30, 1924:—

CASH ACCOUNT					
Balance December 1, 1923 . . . . .					\$2,327 28
<i>Income</i>		<i>Receipts</i>			
Board of inmates . . . . .				\$51,586	53
Personal services:					
Reimbursement from Board of Retirement				52	02
Sales . . . . .				728	63
Interest on bank balances . . . . .				153	22
Refunds, account of previous years . . . . .				5	00
Refunds, account of current year . . . . .				414	44
					\$52,939 84
<i>Receipts from Treasury of Commonwealth</i>					
Advance Fund . . . . .					10,500 00
Maintenance appropriation (October and November, 1923)					6,200 28
Maintenance appropriation . . . . .					88,564 81
Special appropriations—1923 . . . . .					73 20
Special appropriations . . . . .					2,779 85
Total . . . . .					\$163,385 26
<i>Payments</i>					
To Treasury of Commonwealth . . . . .					\$52,301 55
Maintenance appropriations—1923 . . . . .					8,531 97
Maintenance appropriations . . . . .					88,564 81
Special appropriations—1923 . . . . .					68 79
Special appropriations . . . . .					2,779 85
Advance Fund . . . . .					10,500 00
Income Account . . . . .					218 85
Refunds, account of previous years . . . . .					5 00
Refunds, account of current year . . . . .					414 44
Total . . . . .					\$163,385 26
MAINTENANCE					
Appropriation, current year . . . . .					\$170,685 00
Expenses as analyzed below . . . . .					161,280 99
Balance reverting to Treasury of Commonwealth . . . . .					\$9,404 01
<i>Analysis of Expenses</i>					
Personal services . . . . .				\$87,394	61
Food . . . . .				24,472	71
Medical and General Care . . . . .				7,129	57
Farm . . . . .				9,461	29
Heat, Light and Power . . . . .				12,462	28
Garage, Stable and Grounds . . . . .				2,659	78
Travel, Transportation and Office Expenses . . . . .				1,391	79
Religious Instruction . . . . .				1,540	00
Clothing and Material . . . . .				2,990	87
Furnishings and Household Supplies . . . . .				5,395	66
Repairs, ordinary . . . . .				5,670	65
Repairs and Renewals . . . . .				711	78
Total expenses for maintenance . . . . .					\$161,280 99
SPECIAL APPROPRIATIONS					
Balance December 1, 1923 . . . . .					\$31,315 09
Appropriations for current year . . . . .					7,550 00
Total . . . . .					\$38,865 09
Expended during year (see statement below) . . . . .				\$32,360	66
Reverting to State Treasury . . . . .				48	19
					32,408 85
Balance November 30, 1924, carried to next year . . . . .					\$6,456 24
Object	Chap.—Acts	Whole Amount	Expended 1924	Total Expended	Balance
Purchase of Land . . . . .	225—1920	\$15,000 00	—	\$13,042 25	\$1,957 75
Buildings for State Minor Wards . . . . .	629—1920 502—1921 129—1922	200,000 00	\$1,056 68	\$198,402 91	\$1,597 09
Power and Laundry Buildings . . . . .	494—1923	42,845 00	25,751 77	42,817 42	27 58*
Changing old Infirmary into Nurses' Home . . . . .	494—1923	7,000 00	906 20	6,981 98	18 02*
Furnishing Nurses' Home . . . . .	126—1924	1,000 00	441 00	441 00	559 00
Filtration Sewage Bed . . . . .	126—1924	600 00	597 41	597 41	2 59*
Fire Pump . . . . .	126—1924	3,650 00	3,607 60	3,607 60	42 40
Brass Piping . . . . .	126—1924	2,300 00	—	—	2,300 00
		\$272,395 00	\$32,360 66	\$265,890 57	\$6,504 43
* Reverting to State Treasury . . . . .					48 19
					\$6,456 24



PER CAPITA

During the year the average number of inmates has been 295.04.  
 Total cost for maintenance, \$161,280.99.  
 Equal to a weekly per capita cost of \$10.51.  
 Receipts from sales, \$672.07.  
 Equal to a weekly per capita of \$.0438.  
 All other institution receipts, \$51,791.77.  
 Equal to a weekly per capita of \$3.376.  
 Net weekly per capita, \$7.093.

Respectfully submitted,

JOHN E. FISH, *Treasurer.*

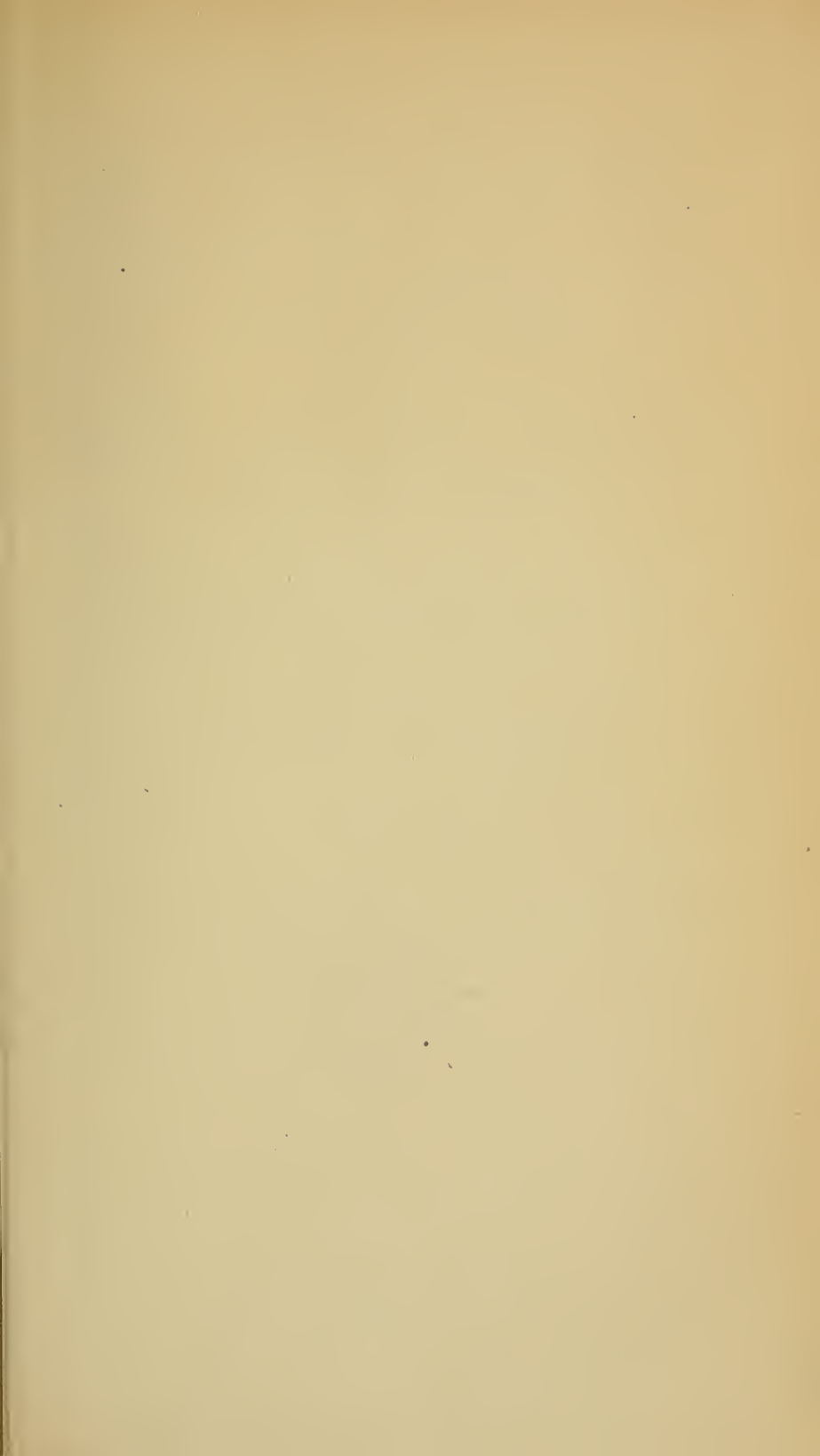
Examined and found correct as compared with the records in the office of the  
 Comptroller.

JAMES C. McCORMICK, *Comptroller.*

VALUATION

November 30, 1924

<i>Real Estate</i>		
Buildings.		\$547,322 08
Land		33,132 32
		<hr/>
		\$580,454 40
<i>Personal Property</i>		
Travel, transportation and office expenses		\$77 32
Food		7,081 46
Clothing and material		6,966 57
Furnishings and household supplies		47,014 92
Medical and general care		10,025 99
Heat, light and power		3,422 29
Farm		17,240 63
Garage, stable and grounds		7,458 60
Repairs, ordinary		4,010 12
		<hr/>
Total		\$103,297 90





**The Commonwealth of Massachusetts**

**ANNUAL REPORT**

OF THE

**TRUSTEES OF THE MASSACHUSETTS  
HOSPITAL SCHOOL**

FOR THE

**YEAR ENDING NOVEMBER 30, 1925**

DEPARTMENT OF PUBLIC WELFARE



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APPROVED BY THE

COMMISSION ON ADMINISTRATION AND FINANCE

# OFFICERS

OF THE

## MASSACHUSETTS HOSPITAL SCHOOL

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### TRUSTEES

EDWARD H. BRADFORD, M.D., BOSTON  
WILLIAM F. FITZGERALD, BROOKLINE  
WALTER C. BAYLIES, TAUNTON  
ANDREW MARSHALL, BOSTON  
GEORGE H. ELLIS, NEWTON

### RESIDENT OFFICERS

JOHN E. FISH, M.D., *Superintendent and Treasurer*  
ORA G. DANIELS, M.D., *Assistant Physician*  
LYSANDER S. KEMP, M.D., *Assistant Physician*  
ESTHER TUTTLE, M.D., *Assistant Physician*  
MABEL J. GODDARD, *Chief Clerk*  
GEORGE H. LOMBARD, *Steward*  
RUTH PARK, *Supervisor of Teaching and Community Service*  
MARGARET MACDONALD, R.N., *Head Nurse*  
ALEXSANDRAENA RUDLAND, *Supervising Nurse*  
MILDRED L. SUKEFORTH, *Supervising Nurse*  
LILLIAN N. BRALL, R.N., *Supervising Nurse*  
MARGARET RIDLON, *Head Teacher*  
LILLIAN S. SWIMM, *Head Matron*  
JOHN SMITH, *Chief Engineer*  
JESS BLACK, *Farmer*

## Commonwealth of Massachusetts

### REPORT OF THE TRUSTEES

*To His Excellency the Governor and Honorable Council:*

The Trustees of the Massachusetts Hospital School beg leave to present the following report:

In transmitting the report of the Superintendent of the Massachusetts Hospital School with recommendations for its consideration, the trustees desire to call attention to certain features of the School's activities which merit careful consideration.

In organizing the school at its beginning, it was doubtful whether educational methods would not be secondary to measures necessary to build up the health of crippled and enfeebled children. Accordingly, for motives of economy, no school building was included in the original plan. The unusual success in the last fifteen years in educating the crippled inmates of the institution has been most gratifying. This has been clearly demonstrated by the reports which have been received from the recently organized Alumni Association of the graduates of the school, a group which has organized itself actively, with stated meetings and reports of progress which indicate the self-supporting activities of a large number of individuals who entered the school in a helpless condition. It can be stated without qualification that a large number of these individuals would have been either helpless almshouse inmates, or else a heavy burden upon their relatives, were it not for the operation of the Hospital School, which has made of this class assets to the community rather than a burden and a financial liability. This Alumni Association has called to the attention of the Board of Trustees, the need of a proper school building instead of the imperfectly equipped schoolrooms which have furnished the only educa-

tional facilities. This, however, has been evident to the Board of Trustees and in their annual reports for the last two years the need of a proper school building has been mentioned. The trustees desire to again present the needs of the institution for a school building such as would be furnished in any community in our commonwealth for a group of three hundred school children.

The Trustees also desire to call attention to the fact that the school has become not only a satisfactory institution, but it has been acquiring a national reputation. Visitors come to study the operation of the institution from distant countries. The Trustees feel that it is important that as the institution has attained such a reputation of service that a proper school building should now be constructed.

The Trustees also desire to mention the satisfactory working of the hospital department for the care of State minor wards. The success of this undertaking in the last year has been most gratifying, and a great variety of diseases are successfully and efficiently cared for by the staff of the institution.

The superintendent's and treasurer's reports are hereunto annexed and made a part of this report.

Respectfully submitted,

EDWARD H. BRADFORD  
WILLIAM F. FITZGERALD  
WALTER C. BAYLIES

ANDREW MARSHALL  
GEORGE H. ELLIS

### SUPERINTENDENT'S REPORT

*To the Trustees of the Massachusetts Hospital School:*

I have the honor to submit herewith my eighteenth annual report as Superintendent of the Massachusetts Hospital School for the year ending November 30, 1925.

Eight hundred and twelve children were cared for during the year, 64 more than were under treatment last year. Coincident with the number 292 in the institution on November 30, 1924, there were also 292 children on November 30, 1925. Five hundred and twenty admissions, exceeding by 47 the number for last year, represent 469 hospital and 51 school cases. In considering the two groups as shown by the admission tables, it should be borne in mind, that all children now being received from the Division of Child Guardianship are certified for admission to the hospital department, and that 14 of the 469 children so entered were transferred to the school division for care and training as crippled children, physically incapable of attending a public school.

The maximum number at any one time during the year was 317, the minimum 203, and the daily average 284.25, as compared to an average of 295.04 last year. Five hundred and twenty children were discharged, 450 from hospital care and 70 from the school division, leaving in the institution at the end of the year 292, 220 school cases and 72 sick minor wards.

The average admission age to the hospital was 9 years, 1 month and 17 days, and to the school 11 years and 12 days, while the average age on discharge from the hospital was 9 years, 7 months and 22 days and from the school 13 years and 4 months.

The nativity statistics show that of the 469 children received primarily as hospital cases 390, or 83 per cent, were born in Massachusetts; 56, or 11+ per cent, were born in other parts of the United States and that 10, or 2+ per cent, were foreign born. One hundred and sixty-one fathers and 212 mothers were American born against 145 fathers and 167 mothers who were foreign born. The birthplaces of 13 children, 163 fathers and 90 mothers were unknown. Of those entering the school, 37, or 74 per cent, were born in Massachusetts, 5, or 10 per cent, in other parts of the United States and 8, or 16 per cent, were foreign born. Seventeen fathers and 16 mothers were American born against 33 fathers and 32 mothers who were of foreign birth. The birthplaces of two mothers were unknown.



DIAGNOSIS ON ADMISSION  
*Hospital Department*

	Boys	Girls
Adenoids, enlarged . . . . .	2	1
Adenoids, enlarged; cystitis . . . . .	—	1
Adenoids, enlarged; dentistry . . . . .	1	1
Alopecia areata; tonsils and adenoids, enlarged . . . . .	1	—
Appendicitis, acute . . . . .	—	4
Appendicitis, chronic . . . . .	2	5
Arthritis, acute; fracture of left 4th metacarpal . . . . .	—	1
Arthritis, multiple . . . . .	—	1
Axillary abscess, chronic . . . . .	—	1
Blepharitis; otitis media, chronic . . . . .	—	1
Blepharitis; otitis media, chronic; rhinitis . . . . .	—	1
Carbuncle of scalp . . . . .	1	—
Cervical glands, enlarged . . . . .	1	—
Chorea . . . . .	2	1
Chorea; dentistry; hiccoughs . . . . .	1	—
Circumcision . . . . .	9	—
Congenital syphilis . . . . .	3	1
Congenital syphilis; keratitis . . . . .	1	—
Congenital syphilis; left tonsil moderately enlarged; slight lordosis of spine . . . . .	—	1
Conjunctivitis; iritis . . . . .	—	1
Cystitis . . . . .	—	1
Dermatitis versicolum . . . . .	1	—
Deviated septum . . . . .	—	2
Eczema . . . . .	1	1
Eczema; blepharitis . . . . .	1	—
Enuresis . . . . .	2	2
Fracture of right forearm . . . . .	1	—
Fracture of wrist . . . . .	1	—
Gonorrheal urethritis . . . . .	1	—
Gonorrheal vulvovaginitis . . . . .	—	11
Hallux valgus . . . . .	—	1
Hernia in scar of appendix operation . . . . .	1	—
Impacted colon . . . . .	—	1
Impetigo . . . . .	11	7
Impetigo; dentistry . . . . .	—	1
Impetigo; phimosis . . . . .	1	—
Impetigo; observation for enuresis . . . . .	1	—
Impetigo and scabies . . . . .	8	1
Impetigo and scabies; dentistry . . . . .	—	1
Infection of finger . . . . .	—	1
Infection of right leg . . . . .	—	1
Infection of heel . . . . .	—	1
Inguinal hernia . . . . .	4	—
Inguinal hernia; circumcision . . . . .	1	—
Inguinal hernia; impetigo . . . . .	1	—
Intestinal indigestion, chronic; (carbohydrate intolerance) . . . . .	—	1
Malnutrition . . . . .	1	—
Medical and cardiac observation . . . . .	—	1
Myalgia . . . . .	1	—
Nasal obstruction; rhinitis . . . . .	—	1
Observation for enuresis; adenoids . . . . .	1	—
Observation for enuresis; old fracture right leg . . . . .	1	—
Observation for enuresis; scabies and dentistry . . . . .	1	—
Observation for heart trouble; endocarditis . . . . .	1	—
Observation for hysterical attack . . . . .	—	1
Observation for masturbation . . . . .	—	1

	Boys	Girls
Observation for colicystitis . . . . .	—	1
Osteomyelitis . . . . .	2	—
Otitis media; bronchitis . . . . .	—	1
Otitis media, chronic . . . . .	4	3
Otitis media, chronic; vertigo . . . . .	1	—
Otitis media; cystitis . . . . .	—	1
Otitis media; cervical glands, enlarged; rhinitis, chronic . . . . .	1	—
Paralysis of right arm . . . . .	—	1
Pernicious anemia . . . . .	1	—
Prolapse of rectum . . . . .	—	2
Prolapse of rectum; circumcision . . . . .	1	—
Prolapse of rectum; rickets . . . . .	—	1
Phlyctenular keratitis . . . . .	—	1
Psoriasis . . . . .	—	1
Psoriasis; dentistry . . . . .	1	—
Rhinitis; eczema; infection of finger . . . . .	1	—
Rickets . . . . .	1	2
Rickets; scoliosis . . . . .	1	—
Rickets; umbilical hernia . . . . .	—	1
Scabies . . . . .	20	17
Scabies; eczema . . . . .	—	1
Scabies; poison ivy . . . . .	—	2
Septicemia . . . . .	—	1
Separation of fibula epiphyses . . . . .	1	—
Spastic paralysis . . . . .	1	—
Spina bifida; dentistry . . . . .	—	1
Tinea circinata . . . . .	2	—
Tonsils and adenoids, enlarged . . . . .	86	119
Tonsils and adenoids, enlarged; arthritis, multiple . . . . .	—	3
Tonsils and adenoids, enlarged; cervical glands, enlarged . . . . .	—	2
Tonsils and adenoids, enlarged; circumcision . . . . .	6	—
Tonsils and adenoids, enlarged; congenital endocarditis; obstet- rical paralysis . . . . .	—	1
Tonsils and adenoids, enlarged; congenital syphilis . . . . .	—	1
Tonsils and adenoids, enlarged; cystitis . . . . .	—	2
Tonsils and adenoids, enlarged; dentistry . . . . .	11	4
Tonsils and adenoids, enlarged; endocarditis . . . . .	1	1
Tonsils and adenoids, enlarged; epistaxis . . . . .	1	1
Tonsils and adenoids, enlarged; functional heart murmur; pre- tuberculous condition and rickets . . . . .	1	—
Tonsils and adenoids, enlarged; gonorrheal vaginitis . . . . .	—	3
Tonsils and adenoids, enlarged; infantile paralysis . . . . .	2	—
Tonsils and adenoids, enlarged; inguinal hernia . . . . .	1	1
Tonsils and adenoids, enlarged; impetigo . . . . .	1	1
Tonsils and adenoids, enlarged; impetigo; dentistry . . . . .	—	1
Tonsils and adenoids, enlarged; large posterior tips on lower turbinate . . . . .	1	—
Tonsils and adenoids, enlarged; laryngitis, chronic . . . . .	—	1
Tonsils and adenoids, enlarged; nasal obstruction . . . . .	1	—
Tonsils and adenoids, enlarged; otitis media, chronic . . . . .	3	2
Tonsils and adenoids, enlarged; rhinitis, chronic . . . . .	1	—
Tonsils and adenoids, enlarged; rickets . . . . .	1	—
Tonsils and adenoids, enlarged; scabies . . . . .	2	—
Tonsils and adenoids, enlarged; scoliosis . . . . .	1	1
Tonsils and adenoids, enlarged; thymus, enlarged; congenital syphilis . . . . .	1	—
Tuberculous disease of hip . . . . .	1	—
Tuberculous disease of spine . . . . .	2	—
Tumor within the substance of the pons . . . . .	1	—

	Boys	Girls
Undescended right testicle . . . . .	1	-
	<hr/> 230	<hr/> 239

*School Department*

Amputation of arms . . . . .	-	1
Arthritis, septic; ankylosis of hips . . . . .	1	-
Ankylosis of right arm . . . . .	1	-
Chronic multiple tuberculous osteomyelitis . . . . .	-	1
Congenital deformities . . . . .	-	1
Club foot . . . . .	-	1
Flexion contractures of thighs and legs . . . . .	1	-
Fracture of both femora, left clavicle and fifth lumbar vertebra . . . . .	1	-
Infantile paralysis . . . . .	3	6
Osteomyelitis . . . . .	6	-
Osteomyelitis; ankylosis of hips . . . . .	1	-
Postoperative slipping patella . . . . .	-	1
Pronated feet . . . . .	-	1
Rickets . . . . .	2	1
Spastic paralysis . . . . .	-	3
Torticollis and scoliosis . . . . .	1	-
Tuberculous arthritis, multiple; amputation of right foot . . . . .	1	-
Tuberculous disease of ankle . . . . .	2	1
Tuberculous disease of knee . . . . .	1	1
Tuberculous disease of knee and elbow . . . . .	-	1
Tuberculous disease of hip . . . . .	4	2
Tuberculous disease of hip and spine . . . . .	-	1
Tuberculous disease of spine . . . . .	2	1

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The school question presents the same problems and involves the same difficulties which have been pointed out in previous reports, and time is forcing them upon our notice with still greater emphasis. We need a separate school building at an estimated cost of \$65,000, nothing more than is considered necessary for the grammar school grades of the average small community. The limited facilities of the four grade rooms now in use were justifiable before the usefulness and practicability of a state school for crippled and deformed children had been given the test of actual experience; but we have now most convincing evidence in the successes of scores of our boys and girls, and a long series of results directly traceable to the opportunities thus far provided, that crippled children of normal mentality should have at least the advantages of a grammar school education. If the state is to educate, it should provide the best education. It has been demonstrated beyond question that children temporarily crippled, those suffering from tuberculous disease of the spine or joints for example, demand something more than hospital treatment. During the long months of convalescence, they should have every opportunity for education consistent with their physical welfare, and by carefully regulated combinations of studies they may be prepared to enter public schools when health has been restored, and without serious loss of time. Neither ignorance nor dependency can be regarded as a result of infantile paralysis, which leaves many children permanently crippled, if moral responsibility is not destroyed and the means for obtaining knowledge deliberately neglected. Some of the school's most prosperous graduates were regarded as hopeless, helpless paralytics until the State's investment of a few hundred dollars made them into self-respecting, independent bread winners. Purely as a business proposition, neither the permanent nor the temporary cripples, of whom there are many, should be denied the opportunity for schooling by reason of limited teaching facilities.

It will be of interest in this connection to review the school work somewhat in detail as submitted by the following report:

*To the Superintendent of the Massachusetts Hospital School:*

This year the school lists have 222 names enrolled. This includes five graduate girls who are scheduled for dressmaking or to assist in the kindergarten. For each of the four grade teachers there is, therefore, an average of over 50 pupils. We have the usual eight-grade arrangement of classes that is found in most public schools. A sub-primary or kindergarten department is also conducted for the youngest children. So that each grade may have the entire attention of the teacher, and also in order to avoid long periods of confinement in even an airy schoolroom, our classes are arranged to get all academic work in shifts not more than two hours long. Each teacher has three of these periods, two of an hour and a half in the morning, one of two hours in the afternoon. By such a division the teacher can give much more individual attention to the pupils, and they can be required to make much more concentrated effort in the time while they are in the classroom. Our experience of fifteen years would seem to show that children of normal intelligence, working in this way can acquire the required school subjects in a much shorter time than under the usual public school program. Our graduates go on into high school work, and children who recover and leave before the eight grades are finished usually find no difficulty in entering a grade corresponding to their class here. It must be remembered that our children have fewer distractions in the course of their daily lives than the child living at home. With movable furniture, all the fresh air possible, and teachers who have in mind each individual child as a problem by himself, the schoolroom becomes more a workshop, less a place of restraint. All subjects not strictly to be classified as academic are also outside the regular daily schedule.

Suppose a visitor came to the Hospital School to observe only the work of the educational department, what would he find? In the first place, the housing of the classes is much scattered. One might go about the pergolas and hardly notice the classes in session. At nine in the morning, however, the first set begin work, both in the academic and industrial classes. If it is a pleasant day, the children in the outdoor rooms will be reading, having blackboard drill, or listening to a story on the open air platforms. A group of second grade children will be eagerly arranging a play-store which is to make real for them the reason for arithmetic in life. Seventh grade boys and girls may be discussing with their teacher the best way to cut and arrange Longfellow's "The Courtship of Miles Standish" for dramatic presentation at the November assembly in the hall. The dressmaking class is in session at the sewing-room. The teacher of handicraft has a group making favors for a coming party. In the Assembly Hall, the boys' chorus may be at work on "Bonnie Dundee" for a coming concert. The band meets on Saturday, so our visitor could not hear that. It is under the leadership of one of our graduates who is just finishing his last year in a city high school, and must be scheduled in his spare time. The regular music teacher has nearly every child in school on her list, and meets most groups twice a week. There is a girls' glee club as well as the boys' chorus. Especially gifted pupils have also personal lessons in voice or piano. The Campfire should not be omitted from the list of educational opportunities here. After half-past three each afternoon the library is open for reading, study, or the drawing of books. It is under the charge of teachers, and school reference work is conveniently carried on.

So the days pass, each with a full program, but with allowance made for rest and recreation as well. Plays, parties, and holiday observances all find place. The summer school gives opportunity for all who are behind in work for any reason to receive special tutoring. Under our program, results seem satisfactory enough to warrant continuance of the short period, relatively small sized class.

A brief outline of our program of studies follows: It omits much detail as to texts, methods, and so on. It represents a minimum requirement that we have found it practical to handle within our class limits.



*Sub-primary*

Counting up to 100, writing figures up to 10. Story telling, based on personal experiences. Dramatization. Selections from "A Child's Garden of Verse," memorized. Handwork, painting, drawing, cutting, weaving, block-building, etc.

*Grade I.*

Combinations of numbers up to 10 written, larger numbers read. Spelling words from Boston First Grade list. ("The Boston Spelling List" is used throughout all the grades.) Phonic drill. Memorizing verse. Reading developed through story-building on blackboard, from children's own experiences. Silent reading, primers and first readers. Dramatization. Writing, names and vocabulary.

*Grade II.*

Arithmetic. The four processes continued. Number games and simple problems. Reading of several first and second readers. Boston word list for spelling. Phonic drill. Daily drill in writing, simple reproduction of stories or verse.

*Grade III.*

Arithmetic. The four processes continued. Simple fractions, United States money, easy problems. Spelling, Boston Word list. Language work includes letter writing, picture study and drill on words commonly misused. Reading, third readers and geographical readers. Other texts for silent and supplementary reading.

*Grade IV.*

Arithmetic based on Stone text for corresponding grades. Spelling. (In this and all following grades it is understood that the Boston Word List for the year is used.) Language drill includes dictation, oral and written reproduction, memorizing, original composition. Reading several basal readers, Robinson Crusoe (DeFoe), historical stories, current events.

*Grade V.*

Arithmetic based on text. Reading, Greek and Roman history stories. Fourth reader, selections. Geographical reading. Map drawing and study. Language, composition. Penmanship.

*Grade VI.*

Arithmetic review of previous grades. Business arithmetic in simple form emphasized. Geography of the United States, emphasizing industries. History, English and American, with much attention to biography of leaders. Current events. Composition, language and penmanship drill. Reading, selections from American and English classics.

*Grade VII.*

Arithmetic, review continued, measurements and interest. American history through the Revolutionary War. Civics and current events. Geography, the countries outside the United States. Language and composition. Reading as in previous years. Book reports on outside reading. Selections from works of Longfellow, Aldrich, Hawthorne, and Cooper.

*Grade VIII.*

Business arithmetic emphasized. Bills, notes, checks, banking, simple book-keeping. Review. American history to present day. Problems of citizenship. Current events. Commercial and industrial geography, United States trade relations. Language and composition. Reading. Book reports. Longfellow, Evangeline. Dickens, A Christmas Carol. One or two plays of Shakespeare. Other selections from classics.

Music: Graded vocal instruction, beginning with note songs in primary grades, to three-part singing in older classics. Solfeggio drill. Exercises for tone, rhythm, enunciation.

Handicraft: Paper cutting and construction. Simple design and drawing, through the grades. Mechanical drawing. Lettering. Toy making.

Sewing: Graded instruction for all girls through fourth grade on. Beginning with simple stitches, applied in the making of towels, doll's clothing, and so on, the girls learn to make underwear, to repair clothing, and finally to cut and make complete outfits for themselves or others.

It seems to be a fact demonstrated by the passage of time and the entrance of more and more of our pupils upon the life in the home community which they left, that they fit in well with the corresponding grades in the public schools. Sometimes they make a gain. Our most serious responsibility is toward those young people who complete their course in the common schools here, and look to us in greater or less degree for guidance and advice as to the next step in assuming responsibilities nearer adult life. The motto of the 1925 class, "Be Self-Reliant", is in spirit the motto of the school. This means when translated into action, that the school should emphasize, first and always, its office as an observer of the industrial field, a collector of all facts which could help in vocational decision, an encouraging consultant at all times in indicating possible courses to pursue in life, and that it should in so doing, point out to the families or guardians of pupils the duty and the importance of individual decisions. It is the policy of the school to furnish light, not to attempt to mould a grammar school child into any preconceived pattern.

Of our newer alumni, 7 have gone into public high schools for further study. In the graduation exercises of 1925, the high standards of former years were maintained. Seventeen received the school diploma. A pleasing feature was the music of the Alumni Band, under the leadership of one of the Alumni Association executive staff. Another innovation, which will, it is hoped, be of annual occurrence, was the presentation of a scholarship prize, four fine books, to that member of the class attaining the best all round standing for the year. This was the gift of the Alumni Association and the presentation was made by the Alumni Secretary.

Our girls are this year offered an opportunity for practice in child-care under the guidance of our primary teacher, a graduate of the Wheelock School. Our sub-primary is organized for each afternoon as a kindergarten, with a pupil assistant, chosen from our graduate or upper-class girls, to serve for a week at a time. Ten girls have so far taken the work, and the interest shown and benefit received both by the girls and the school, have been sufficient to warrant the continuance of the experiment.

With increasingly satisfactory records of our former pupils, comes increasing dissatisfaction with our present school equipment. Our rooms are scattered among the dormitories, on the north side of the buildings, and though equipped with the approved ventilating system for public school use, are without the fine type that has proved so advantageous in our cottages and hospital wards. The present rooms might well be used in changed shape, for other purposes, but their continued use as schoolrooms is no longer advisable. Fifteen years ago we could not determine what was possible in the training of our boys and girls, for we had not the evidence in the lives of our graduates. Today, the record of our alumni is evidence that such training is worth while. The present housing of our classes, while tolerable when numbers were half what they now are, is too great a handicap upon the efforts of our teachers. The inspiration, the increase in school spirit, and the increased efficiency both of administration and instruction that would result from a properly placed school centre, would be new cause for pride to the commonwealth.

Respectfully submitted,

RUTH PARK, *Supervisor of Teaching and Community Service.*

Seventy children were discharged from the school department, 4 more than last year, of whom 11 entered public high schools; 26 recovered, or made sufficient improvement to attend school in competition with normal children; 5 left to become self-supporting; 2 were mentally unpromising; 1 was destined to progressive physical decline; 12 were discharged against advice or failed to



return from visits; 2 were transferred to other hospitals; 1 was out on visit at the end of the year; 3 left the state and 7 children died. Death was due to the following causes: Amyloid degeneration of liver and kidneys and tuberculous disease of hip with abscesses, one case; bronchopneumonia and chronic bronchitis with extreme deformity of chest, one case; amyloid disease of liver and kidneys and tuberculous disease of spine, two cases; miliary tuberculosis and tuberculous disease of hip, one case; miliary tuberculosis and tuberculous disease of knee, one case; tuberculous pneumonia, miliary tuberculous and congenital deformity of chest and hands, one case.

An index of the character and extent of the increased demands made upon the administration by the Bradford Infirmary, and how the new department operates to increase the activities of physicians and nurses will be afforded by the admission diagnosis. Professional energy, acuteness and interest has been stimulated and classes for the training of school nurses, now being organized, may merit your approval of the bestowment of a certificate, upon the completion of the course, in recognition of efficiency in the nursing care of children.

Two hundred and ninety-one surgical operations were performed during the year as follows: Appendectomy, 8; circumcision, 9; correction of congenitally malformed foot and leg, 1; herniotomy, 5; incision and drainage of abscesses, 2; mastoid reopened, 1; reamputation of stump of humerus, 1; removal of polypi from auditory canal, 1; removal of tonsils and adenoids, 262; submucous resection, 1.

Before the completion of another year, it doubtless will be found desirable to extend the dental clinic from the limited half day service to include work for a full time resident dentist. Maintenance and transportation today are items of such importance that a resident may be available without increasing the expenditures under personal services, and with no appreciable change in other divisions of the appropriation for maintenance. The dentist's report for the year shows 441 amalgam fillings; 148 cement fillings; 113 zinc oxide and euginal fillings; 84 synthetic fillings; 84 gutta percha fillings; 1 gold filling; 220 prophylaxis; 242 extractions; 59 treatments; 152 examinations; 1 crown.

In addition to the routine repairs, always present and often discouraging to those engaged in the general upkeep of the property, some progress has been made in the way of improvements itemized as not occurring annually. The old maple floor in the kitchen of the administration building was replaced by a substantial floor of 7" x 9" quarry tile embedded in cement. The kitchen yard, always a source of trouble from dust in the summer and snow or mud in winter, was carefully graded and covered with 708 sq. yards of cement, extending past the laundry to the pergola crossing on the east and to the service avenue crossing on the north. Hexagonal asbestos shingles were laid on the roof of the men's cottage and the old paroid covering on the cow barn was replaced with new. Two new portable houses were erected upon cement foundations to increase the capacity of the poultry plant. Two small rooms were converted into one room by the removal of a partition in the Superintendent's apartment and the piazza at the domestic science cottage was renewed.

On April 1st the deep well pump failed to deliver water into the high pressure tank, to supplement the supply from the town, and upon examination was found to be so badly worn from constant use that either replacement or expensive repairs were necessary. The uncertainty of a continuous yield of a profitable supply from the artesian well, which has already shown some shrinkage, led to the consideration of whether it might not be desirable to discontinue the use of the deep well pump altogether. It was finally decided to repair the old pump, as an emergency measure, in the anticipation that by the time it again needs to be given special consideration the town will have an increased water supply from wells driven the past summer with adequate pressure from a new standpipe now in process of construction.

The engineer's record for repairs shows that much piping has required replacement and before the completion of another year the two 25 kilowatt generators at the engine room, which have been run at maximum capacity since the opening of the Bradford Infirmary, must be relieved of their load. There

is some probability that this emergency may be temporarily met by utilizing a 35 kilowatt generator and a 50 horsepower engine which has been found inadequate to meet the demands of another state institution. I would recommend, however, an appropriation for new equipment at an estimated cost of \$4,800. The increase in the number of bed patients has also caused complications in the laundry which can be overcome by a foot power press, the purchase of which, at a cost of \$375, will obviate the necessity of an additional laundress. We should make some provision to prevent the high pressure steam from passing beyond the food steamers into waste pipes, which disintegrate when subjected to high temperature. The steam reducing valve is ineffective and I would recommend the installation of a blow off tank at an estimated cost of \$500.

Special consideration has been given to the most practical way to prevent danger from fire in buildings which were not designed primarily in fireproof construction. The town's fire alarm system has been extended down Randolph street from Washington street, directly to the kitchen entrance to the administration building and a private fire alarm box installed. The installation of a high pressure steam turbine fire pump last year has given the institution the most efficient fire hydrant protection to be found anywhere in the town of Canton. The Canton fire department now has a thoroughly modern motorized fire fighting equipment, which includes a pumping engine of 750 gallon rating, and with regular duty firemen at the central station not more than five minutes should be allowed for response to a call from our box. The industrial building, while it is better protected and less hazardous than most wooden buildings, does not give that feeling of security to be found in more substantial construction. It will be recalled that this building was erected at a time when there was some uncertainty as to the future needs and educational equipment of the institution, and that an inexpensive factory type of building only was justifiable, in the anticipation that it might more properly be used for storage and supplies, or even be given up altogether without material loss, as the growth of the institution indicated the wisdom of permanent construction for a more definite purpose. The building has proved to be a profitable investment, but the success of the school and its graduates amply justifies the erection of an independent permanent school building now that experience has definitely pointed the way.

The farm continues to be a source of profit, not necessarily in the matter of individual crops, which may even show a loss now and then, but in the activities as a whole, the gain for the year, figured in accordance with the present system of accounting, is found to be \$7,368.54. Nearly one half of the labor of farm employees and teams is charged to such institution work as the transportation of coal, the removal of ashes, rubbish and garbage, the delivery of milk and ice, the removal of snow, the handling of freight, etc. One hundred three thousand one hundred and seventy quarts of milk were produced at a cost of \$7,533.83, or .0755 per quart. Other products of the farm were as follows: Eggs, 5,048 1/6 dozen; potatoes, 13,671 pounds; asparagus, 310 pounds; beans (string), 846 pounds; beans (shell), 311 pounds; beets, 3,890 pounds; beet greens, 222 pounds; cabbage, 6,842 pounds; carrots, 6,219 pounds; cauliflower, 273 pounds; celery, 875 pounds; Swiss chard, 554 pounds; corn, 3,727 pounds; cucumbers, 2,102 pounds; lettuce, 453 pounds; onions, 2,114 pounds; parsnips, 1,560 pounds; peas (green), 387 pounds; peppers, 736 pounds; pumpkins, 942 pounds; radishes, 157 pounds; rhubarb, 551 pounds; spinach, 295 pounds; squash (winter), 944 pounds; squash (summer), 899 pounds; tomatoes, 7,897 pounds; turnips, 9,517 pounds; beef, 2,477 pounds; pork, 6,526 pounds; fowl, 2,882 pounds; ensilage, 155 tons; mangel-wurzel, 5 1/2 tons; millet, 1 ton; oats and peas, 10 1/2 tons.

There appears to be no reason why the products of the farm should be increased materially. More land should be cleared for pasturage each year and it is to be regretted that the inmate labor of some of the other institutions is not available for the purpose.



Maintenance expenditures for the year amounted to \$169,171.98, exceeding those of last year by \$7,890.99. The actual increases not accounted for by change in inventory were found to be due to a greater stability of personal service, an increase in telephone rates and greater demand for medical and general care. Food represents an increase of \$1,542.56, or \$766.81 increase in expenditures and \$775.75 decrease in inventory. Expenditures for furnishings and ordinary repairs show a decrease of \$675.24 and \$922.34 respectively, for transfer to items which could not be curtailed. On the other side of the ledger to our credit for another year, income from all sources is found to be \$80,851.30, exceeding by \$27,921.46 the income of last year.

The demands made upon the bookkeepers are increasingly more exacting and much overtime and night work have been necessary to meet the requirements of the prescribed system of accounting. Great credit is due the chief clerk for her painstaking effort, early and late, with inexperienced assistants, to cheerfully face the tasks assigned.

Reference should also be made to the heads of other departments and to many associates who have rendered most creditable service.

Fortunately there have been few changes in our personnel and none involving officials at the head of a service, with the exception of the head teacher and the chief engineer. Mr. William H. Coffin resigned in July on account of ill health and your recognition of his long and most efficient service, by an extended leave of absence, was much appreciated by one who has given his best to the service. After many years of loyal and faithful service, Mrs. Cora E. Richardson resigned as head teacher in August. The vacancy thus caused was filled by the appointment of Miss Margaret Ridlon, Wheaton College A.B. 1921.

Dr. Penelope Sherwood resigned in March to accept an appointment in a New York hospital and was succeeded in April by Dr. Esther Tuttle, a graduate of the Tufts College Medical School.

The position of supervisor at the Bradford Infirmary, left vacant in October by the resignation of Miss Elizabeth C. Shaw, R.N., was filled by the appointment of Miss Lillian N. Brall, R.N., a graduate of the Boston Children's Hospital in the class of 1924.

Community service has been established and the work has already been well organized. Miss Ruth Park, familiar by long experience with the teaching of crippled children, returned in August with broadened experience for her new responsibilities. Miss Park's thorough understanding of our teaching problems and her intimate association with our graduates, both as teacher and member of the Alumni Association, are invaluable for the advancement of our field of usefulness.

Acknowledgment is hereby made in appreciation of very many Christmas gifts from churches, societies, and individuals. For theatre parties, concerts, picnics and automobile rides, provided by the Elks, the Rotarians and other kind friends, we are also grateful.

The importance of keeping the interest of old friends and gaining the assistance of new ones cannot be emphasized too strongly, because it is only by the increasing support of the public and a better appreciation of accomplishments and possibilities that the school can render the greatest service to the community.

Respectfully submitted,  
JOHN E. FISH, *Superintendent and Treasurer.*

#### TERMS OF ADMISSION

Crippled and deformed children of the Commonwealth, between the ages of five and fifteen, who are mentally competent to attend the public schools, are eligible for admission.

Feeble-minded and epileptic children will not be received.

Payment for the board of private patients must be made in advance, unless sufficient surety therefor is given.

The institution is located on Randolph Street in the town of Canton, about two miles from Canton and Canton Junction stations of the New York, New Haven & Hartford Railroad.

Automobile bus connects with two trains at Canton Junction station on Saturdays and Sundays.

Postoffice address: Canton, Mass.

Applications for admission should be made to the superintendent.

*Nativity and Parentage of Children Admitted*

Birthplace	Patient	Father	Mother
Massachusetts . . . . .	427	113	141
Other New England States . . . . .	34	28	52
Other States . . . . .	27	37	35
Total native . . . . .	488	178	228
Other countries:			
Armenia . . . . .	—	6	5
Austria . . . . .	—	8	9
Azores . . . . .	—	2	3
British West Indies . . . . .	—	1	2
Canada . . . . .	10	37	46
Cape Verde Islands . . . . .	—	3	2
Czecho Slovakia . . . . .	—	1	—
Denmark . . . . .	1	3	—
England . . . . .	1	7	10
Finland . . . . .	2	4	7
France . . . . .	—	—	4
Germany . . . . .	—	2	3
Greece . . . . .	—	5	2
Hungary . . . . .	—	1	1
Ireland . . . . .	—	10	23
Italy . . . . .	2	31	24
Lithuania . . . . .	—	3	8
Norway . . . . .	—	1	—
Poland . . . . .	1	20	14
Portugal . . . . .	1	6	7
Russia . . . . .	—	18	22
Scotland . . . . .	—	1	—
Spain . . . . .	—	1	1
Sweden . . . . .	—	3	2
Syria . . . . .	—	4	4
Total foreign . . . . .	18	178	199
Unknown . . . . .	13	163	92
	<hr/> 519	<hr/> 519	<hr/> 519

## TREASURER'S REPORT

To the Trustees of the Massachusetts Hospital School:

I respectfully submit the following report of the finances of this institution for the fiscal year ending November 30, 1925:—

<i>Income</i>		<i>Receipts</i>
Board of Inmates . . . . .		\$79,762 49
Personal services:		
Reimbursement from Board of Retirement . . . . .		62 86
Sales . . . . .		513 32
Interest on bank balances . . . . .		125 81
Refunds, account of previous year . . . . .		96 77
Refunds, account of current year . . . . .		69 37
Refunds, account of special appropriations . . . . .		102 18
		<hr/>
		\$80,732 80

<i>Receipts from Treasury of Commonwealth</i>	
Advance fund . . . . .	10,500 00
Maintenance appropriation . . . . .	92,052 78
Special appropriations . . . . .	545 25
	<hr/>
Total . . . . .	\$183,830 83

<i>Payments</i>	
To Treasury of Commonwealth . . . . .	\$80,464 48
Maintenance appropriation . . . . .	92,052 78
Special appropriations . . . . .	545 25
Advance fund . . . . .	10,500 00
Refunds, account of previous years . . . . .	96 77
Refunds, account of current year . . . . .	69 37
Refunds, account of special appropriations . . . . .	102 18
	<hr/>
Total . . . . .	\$183,830 83

<i>MAINTENANCE</i>	
Appropriation, current year . . . . .	\$177,956 52
Expenses as analyzed below . . . . .	169,171 58
	<hr/>
Balance reverting to Treasury of the Commonwealth . . . . .	\$8,784 94

Total Receipts and Payments are in agreement with Comptroller's books of accounts.

JAMES C. McCORMICK, *Comptroller.*

<i>Analysis of Expenses</i>	
Personal Services . . . . .	\$91,094 07
Food . . . . .	25,239 52
Medical and general care . . . . .	7,916 60
Farm . . . . .	10,288 69
Heat, light and power . . . . .	14,185 80
Garage, stable and grounds . . . . .	2,866 56
Travel, transportation and office expenses . . . . .	1,963 98
Religious instruction . . . . .	1,490 00
Clothing and materials . . . . .	3,292 95
Furnishings and household supplies . . . . .	4,720 42
Repairs, ordinary . . . . .	4,748 31
Repairs and renewals . . . . .	1,365 08
	<hr/>
Total expenses for maintenance . . . . .	\$169,171 98

<i>SPECIAL APPROPRIATIONS</i>	
Balance November 30, 1924 . . . . .	\$6,456 24
Expended during year (see statement below) . . . . .	\$580 76
Reverting to State Treasury . . . . .	1,001 65
	<hr/>
	1,582 41
Balance November 30, 1925, carried to next year . . . . .	\$4,873 83

<i>Chapter Appropriation Expenditures Balance</i>			
Purchase of Land . . . . .	225-1920	\$15,000 00	\$13,042 25
Buildings for . . . . .	502-1921		
State Minor Wards . . . . .		200,000 00	198,998 35
	129-1922		
Furnishing Nurses' Home . . . . .	126-1924	1,000 00	441 00
Fire Pump . . . . .	126-1924	3,650 00	3,592 92
Brass Piping . . . . .	126-1924	2,300 00	
		<hr/>	<hr/>
		\$221,950 00	\$216,074 52
			\$5,875 48
			1,001 65
			<hr/>
			\$4,873 83

\*Reverting to State Treasury . . . . .

During the year the average number of inmates has been 284.25.  
Total cost of maintenance, \$169,171.98.  
Equal to a weekly per capita cost of \$11.445.  
Receipts from sales \$513.32.  
Equal to a weekly per capita of \$.035.  
All other institution receipts \$79,946.95.  
Equal to a weekly per capita of \$5.51.  
Net weekly per capita \$6.

Respectfully submitted,

JOHN E. FISH, *Treasurer.*

November 30, 1925

## Real Estate

Buildings	\$547,322	08
Land	33,132	32
	<u>\$580,454</u>	40

## Personal Property

Travel, transportation and office expenses	\$23	86
Food	6,116	69
Clothing and material	6,193	27
Furnishings and household supplies	44,492	50
Medical and general care	10,992	89
Heat, light and power	4,334	45
Farm	16,194	93
Garage, stable and grounds	7,510	31
Repairs, ordinary	3,814	31
Total	\$99,673	21







